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MOTOR GASOLINES, SUMMER 1970



MOTOR GASOLINES, SUMMER 1970

by

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INTRODUCTION

The properties of motor fuels sold through service stations in the United States are reported in accordance with a cooperative agreement between the American Petroleum Institute and the Bureau of Mines of the United States Department of the Interior. By agreement with the American Petroleum Institute, identification of the data by item number is confidential.

Analytical data for 5,104 samples that represent the products of 69 companies are included. Company representatives collected the samples during June, July, and August 1970. As in previous surveys, the gasolines covered by this survey include those from both large and small suppliers. Laboratories of various refiners, motor manufacturers, and chemical companies obtained and submitted the data to the Bureau of Mines for compilation. Motor-gasoline survey reports published during the past 10 years are listed on page 4.

SUMMARY

The characteristics of motor gasolines for summer 1970 are summarized in table 1, and for comparison, those for summer 1969 are shown in table 2. Trends of some of the more important characteristics for several years are shown in figures 1 and 2. The following data show trends of national average octane numbers during recent years:

	Regular Octane	r-price number	Premium Octane	n-price number
	Research	Motor	Research	Motor
Winter 1968-69	93.8	86.3	99.8	92.2
Summer 1969	93.8	86.1	99.9	92.0
Winter 1969-70	93.8	86.3	99.8	92.2
Summer 1970	93.8	86.3	99.8	92.2

Tables 3 and 4 show regional average octane numbers of regular- and premiumprice fuels.

Data for third grade, intermediate grade, and super-premium gasolines are included in table 5.

Data for gasolines that contained less than 0.75 g Pb/gal are included in table 6. Data for each of the 38 items in the table are averages for the number of samples indicated. Eighty-nine samples representing 9 brands marketed in 23 locations are represented in the table.

DISCUSSION OF DATA

Terms used in the surveys have the following meanings:

District: The designation of a marketing area for collecting samples and data. The present arrangement of 17 districts, developed by the CFR Committee, 1/ was selected with reference to the specifications on motor gasolines, refinery locations, population centers, and arteries of commerce such as navigable rivers. The States or parts of States in each district are indicated in the headings of table 3 and are shown in figure 5.

Brand: The gasoline sold within a given price group and by a given trade name.

Item: The index number assigned to a given brand in a given district. The data for each item represent the average of those submitted for that brand in that district. The number of samples represented follows the item number.

Sample: The supply of gasoline obtained at the service station and analyzed in the laboratory

Table 3 presents by districts data for gravity in degrees API, sulfur, gum, lead, research- and motor-method octane numbers, Reid vapor pressure, and distillation characteristics of the motor fuels collected. The tests were made according to American Society for Testing and Materials standards. 2/

Corrosion test results are not included in the district tables as all the reported numbers are "1," according to the corrosion scale given in table 1 of ASTM D130. 2/

American Society for Testing and Materials, 1970 Book of ASTM Standards, Part 17, Petroleum Products -- Fuels; Solvents; Burner Fuel Oils; Lubricating Oils, Cutting Oils; Lubricating Greases; Hydraulic Fluids, Philadelphia, Pa., 1,294 pp.

Coordinating Fuel and Equipment Research Committee (formerly the Coordinating Fuel Research Committee) of the Coordinating Research Council, Inc. From 1935 to 1948 the motor-gasoline surveys were conducted under a cooperative agreement between the Coordinating Research Council and the Bureau of Mines.

Gum test data are reported to the nearest whole number. The distillation temperatures, corrected to barometric pressure at 760 mm Hg, are those for percent evaporated.

Average values follow the tabulated data in table 3 for the respective grades of fuel shown in each district. The averages of the various properties were computed without reference to the total number of samples represented by each item.

The district averages from table 3 are shown in table 4 with the number of brands and number of samples for regular- and premium-price gasoline in each district. The national averages for each of the properties of fuels sold in each of the 17 districts are given at the end of the table.

Table 5 shows data for third grade, intermediate grade, and super-premium motor gasolines.

Figures 1 and 2 illustrate trends in the national averages of certain properties of regular- and premium-price gasolines, respectively, since the summer of 1946. Averages for the winter surveys are plotted on the lines that represent the years and for the summer surveys between the lines. Octane-number points are connected for successive surveys, but those for Reid vapor pressure and distillation temperatures are plotted separately for summer and winter surveys. Charts that show plots of these properties from 1935 (except winter 1941-42 and summer 1942) are presented in the survey report on motor gasolines for winter 1964-65 and preceding reports. 3/

Figures 3 and 4 illustrate distribution (frequency) of octane values by numbers of samples for all grades of fuel represented. Each bar represents one-half octane number.

Data for gasolines that contained less than 0.75 g Pb/gal are included in table 6. The analyses represented by the data in table 6 also are included in the items in tables 3 and 5 with their respective grades. However, the data in table 6 do not correspond to item numbers in the other tables because data in table 6 were collated for each brand marketed in each city, rather than for each brand marketed in an entire district.

Tables 7 and 8 show the percentages of all samples for each district at each whole octane number level, cumulated according to increasing octane number.

^{3/} Blade, O. C., Motor Gasolines, Winter 1964-65. Bureau of Mines Petroleum Products Survey No. 40, 38 pp. (in cooperation with the American Petroleum Institute).

The districts, locations, and number of samples of gasoline represented are listed in table 9 and shown on the map in figure 5. The locations are named for the principal cities in the respective vicinities, and include suburbs and adjacent communities. The area of the circle at each location is proportional to the number of samples obtained. The summary at the end of table 9 lists by district, the number of locations, samples, and the percentages of the latter based on the total reported.

This report does not discuss the significance of the data presented. Reference may be made to the ASTM specification 4/ for motor gasoline and its appendix, "Significance of ASTM Specifications for Motor Gasoline," at a technical library.

LIST OF MOTOR-GASOLINE SURVEY REPORTS, 1961-70

A t. l	Anna d		PPS	D-+- D		No.
Author	Season c	ind Year	Report No.	Date Pul	orrsnea	of pages
In cooperation with	the Ame	rican Petro	oleum Institute			
Blade, O. C.	Summer	1961	22	Jan.	1962	32
Do.	Winter	1961-62	25	June	1962	33
Do.	Summer	1962	27	Jan.	1963	32
Do.	Winter	1962-63	30	June	1963	32
Do.	Summer	1963	33	Jan.	1964	35
Do.	Winter	1963-64	35	June	1964	40
Do.	Summer	1964	37	Dec.	1964	40
Do.	Winter	1964-65	40	July	1965	38
Do.	Summer	1965	43	Jan.	1966	39
Do.	Winter	1965-66	45	June	1966	38
Do.	Summer	1966	48	Dec.	1966	38
Do.	Winter	1966-67	50	June	1967	38
Do.	Summer	1967	53	Dec.	1967	38
Do.	Winter	1967-68	55	June	1968	39
Do.	Summer	1968	58	Jan.	1969	38
Do.	Winter	1968-69	60	July	1969	38
Blade, O.C. and						
Ella Mae Shelton	Summer	1969	63	Jan.	1970	38
Shelton, Ella Mae and						
C. M. McKinney	Winter	1969-70	66	Aug.	1970	47
Do.	Summer	1970	This report	Talligi		

^{4/} American Society for Testing and Materials, Tentative Specifications for Gasoline (D439): 1970 Book of ASTM Standards, Part 17 (see footnote 2), pp. 173–183.

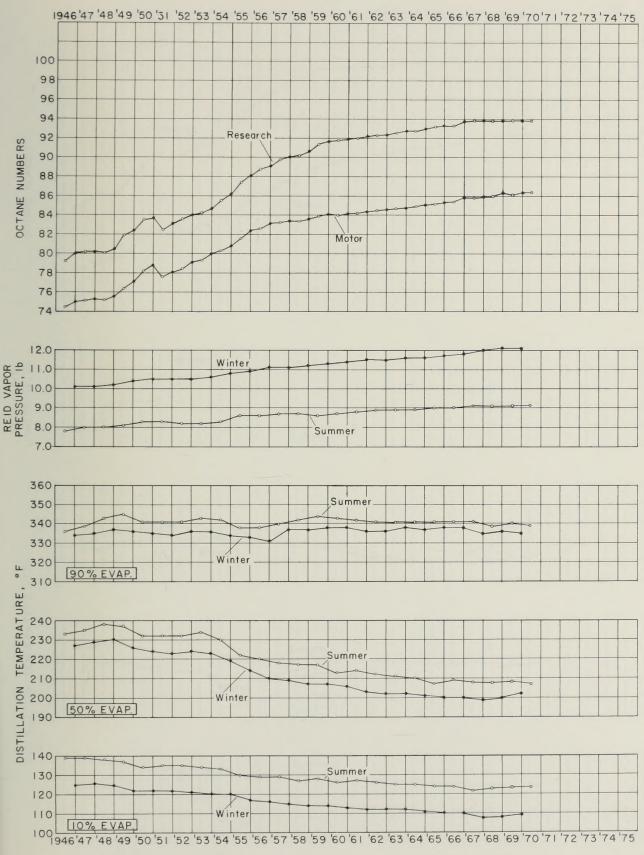
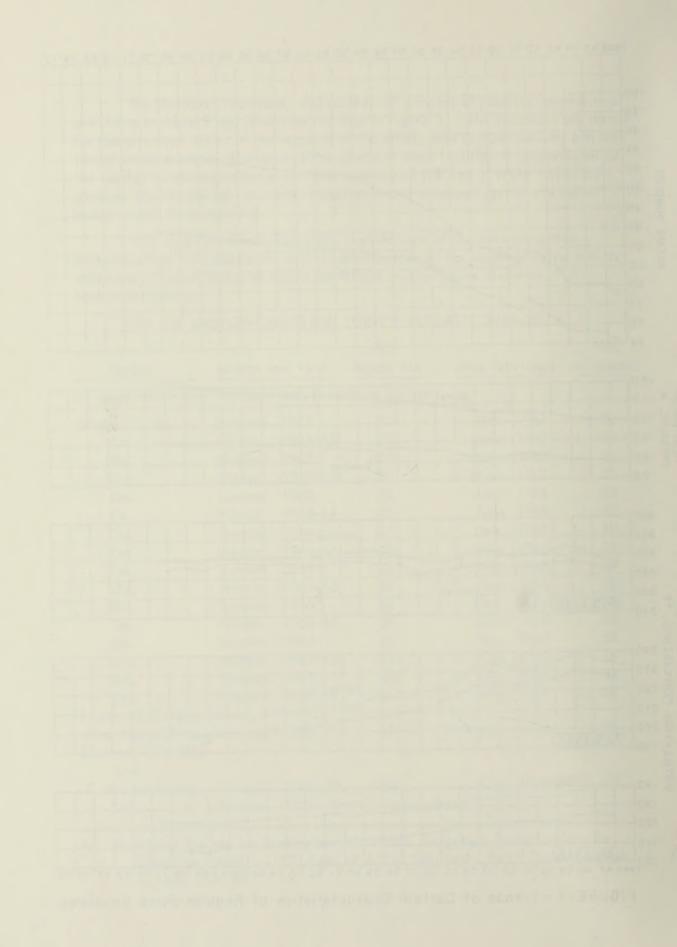


FIGURE 1.—Trends of Certain Characteristics of Regular-Price Gasolines.



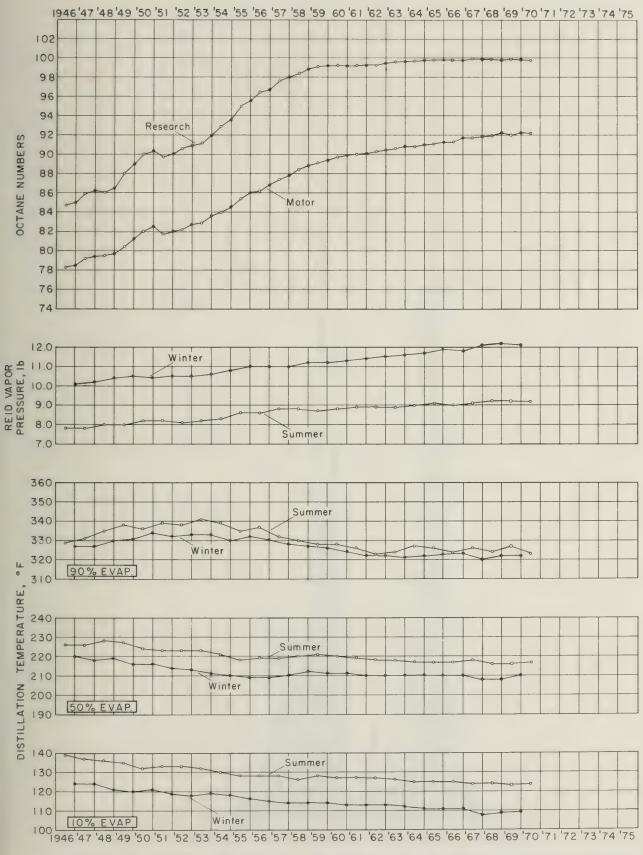


FIGURE 2.-Trends of Certain Characteristics of Premium-Price Gasolines.



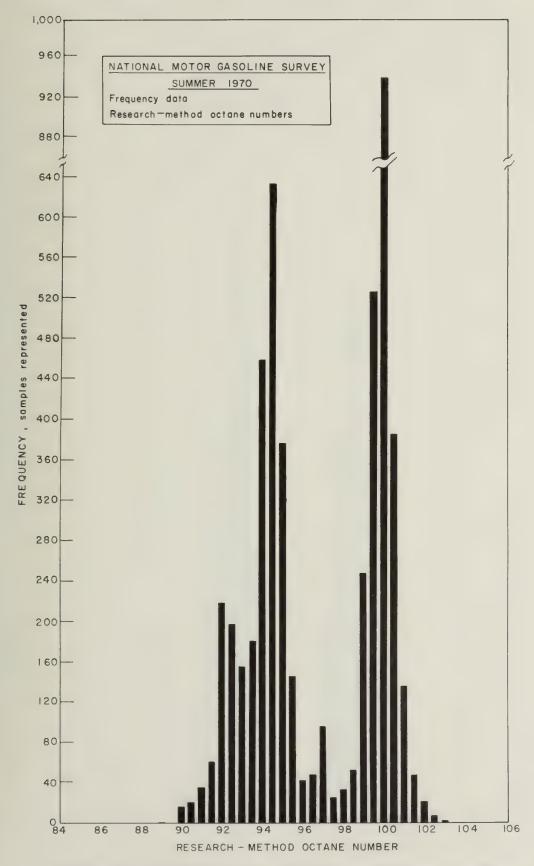


FIGURE 3.— Distribution of Research — Method Octane Numbers.



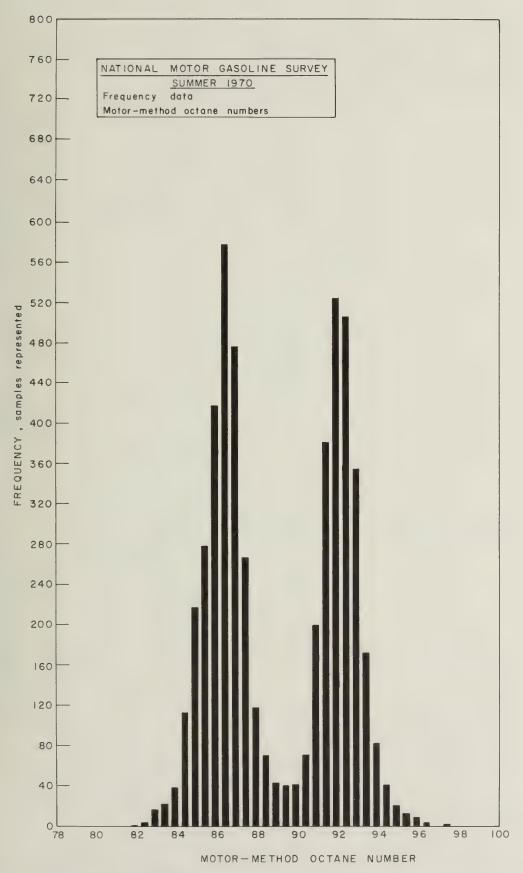


FIGURE 4. — Distribution of Motor — Method Octane Numbers.



TABLE 1. - Summary of values, motor gasoline survey, summer 1970

Test	ASTM method	Regular-price gasoline Average	Premium-price gasoline Average
Gravity, °API	D287	61.1	60.8
Corrosion, No.	D130	1	1
Sulfur content, wt %	D1266	0.042	0.021
Gum, mg/100 ml	D381	1	1
Lead, g/gal	D526	2.43	2.81
Octane number, Research	D908	93.8	99.8
Octane number, Motor	D357	86.3	92.2
Reid vapor pressure, Ib	D323	9.1	9.2
Distillation	D86		
Temp, °F			
IBP		93	92
5% evaporated		110	109
10% do		123	124
20% do		143	148
30% do		163	172
50% do		207	217
70% do		260	257
90% do		339	323
95% do		372	355
End point		410	399
Residue, vol %		0.9	0.9
Loss, vol %		1.5	1.6

TABLE 2. - Summary of values, motor gasoline survey, summer 1969

Test	ASTM method	Regular-price gasoline Average	Premium-price gasoline Average
Gravity, °API	D287	61.1	60.9
Corrosion, No.	D130	1	1
Sulfur content, wt %	D1266	0.042	0.022
Gum, mg/100 ml	D381	1	1
Lead, g/gal	D526	2.48	2.89
Octane number, Research	D908	93.8	99.9
Octane number, Motor	D357	86.1	92.0
Reid vapor pressure, lb	D323	9.1	9.2
Distillation	D86		
Temp, °F			
IBP		92	91
5% evaporated		110	108
10% do		123	123
20% do		143	146
30% do		163	170
50% do		208	216
70% do		262	259
90% do		340	327
95% do		373	359
End point		414	406
Residue, vol %		1.0	0.9
Loss, vol %		1.3	1.4

TABLE 3. - MOTOR GASOLINE SURVETA SUMMER 1970
AVEHAGE DATA FOR DIFFERENT BRANDS

DIST. 1 NORTHEAST M.H., VT., AND NORTHERN N.Y.

		Œ	\rightarrow	GUM,	la8	OCTA	NE NUM	BER	>			7	IST	DISTILLATION	ION	ASTR	08	9		
1	SAM	ASTM	ASTM	N S S	ASTE	ا لما ا	0	Z + Z	ASTM	TEMP	ERAT) (C	ORRE	CTED		160	I		
E	7	V Q	→ 	I S	0526 G/GAL	000	ASEM 0357		2 Z	186	ın	2	20 E E	30	50 70 50 70	0 0	6 0	2	ž ~	KS LUS
1	ın		0.034	0	~	4		90.7		66		124	44	2	1.4	9	9	4	0	9 2
2	~	5	.024	~		5		91.1					m	_	-	CI.	8 3	6 6 3	9	.1.
m	•	7	.032	~	1.73	in	9	6.06		93	109	123 1	148	6	29	290 3	1 3	4	4	. 1.
47		59.6	.027			7.96	87.8	92,3	10.6	89	100	116	140	163	210 2		29 3	59 4	0	.0 2
10	m	0	8	•		5	•	0			0	121	39	0	-	7.8	45 3	1 4	9	
•	50	2	.017	-		4		91.3		87		116	137	~	0.4	263 3	6 3	4		9 2
7	40	0	.050	-	1.77	4		0		69	105	116	135	9	2		9 3	7 4	0	.0
•	2	1.	.028		•	4	9	0				124	142	~	60	C	39 3	0 4	0	
0	4	0	.019	2		4	. 9					118	137	~	90	268 3	53 3	3 4	2	0.
	80	2	.040		4	4	9	0		06		117	_	0	08	63	39 3	3 4	7	.0
11	-	0	.030	-		95.2		91.0			9	121	143	4	211	270 3	5 3	1 4	4	0.0
	6	0	.062		5	5.	. 9	0			104	118		4	4	2	48 3	0		
	-	6	.047	-	5						100	113	2		-	9	50 3	4 0	23 1	0.0
	NO.	2	.028	-		4	9			91	105	118	138	9	60	248 3	30 3	60 4		
-	4	62.1	.102	N	-	5	5				101	120	139	60	66	9	9	0 4	151	0
VERAGE		60.B	010	-	2.33	0 20	AKA	000	0	00	105	9 1 1	30	141	SOR	5 770	FFD	AAA	- 6 +	0

TABLE 3. - MOTOR GASOLINE SURVEY, SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 1 NORTHEAST == CONTINUED
MAINE, MASS., N.H., VT., AND NORTHERN N.Y.

	GR.	SULF	GUM,	LEADA	DCTANE	NE NUMBE	BER	>			3	ISTI	DISTILLATION	NOI	ASTM	4 D80				
SAN	AST		ST	ASTM	la.	10	¥ + ×	I	TEMPE	PERATURE		F (C	CORRECTED	CTED	TO	760 1	HM HG	<u>.</u>		
TTEN PLE	5 02		0381	0526	S	ST		0323			PE	ERCENT	ΕV	APORA	ATED			RE	S	055
	API	* *	U	G/GAL	0000	D357	~		186	5 1	0	20 3	0 5	2 0	6 0	6 0	5 EP		**	
9	3	0.017	-	•	101	-	96.5		68		1 19 1	42 1	7 2	7 2	7 3	ന	51 40	7 1	.0 2.	_
	63.		-	0	100.2		96.4		06	1001	111 1	128 1	5	00 2	9	5	6		9 1.	~
40	-	00	-	4	00	92.0	96.1	0	92		120 1	143 1	68 2	8 2	62 3	25 35	52 38	_	1.	ø
6	59	0.	-		66		95.4			101	114 1	9	8 2	4 2	8	9	3			
20	61.					2			92	9	119	ev.	7 2	N	2	m	'n	97 1.	1 1.	60
25	57.		-	2.56	99.	-	95.9	6		103	90		2	5	9	ന	c.	40	8 1.	
22	57	•	•	9	00		96.4		-	03	17	C)	169 2	3 2	m	m	6	86 1	N	_
23	61.			4		2	9.96		06	9		43	e.	2	е В	m	C.	~	•	٠,
40	60,	_	~	90	00	-	9	9.5		66	9	NO.	80	9 2	54 3	e e	4	0	.9 1.	OK.
100	62.		~	•		2	96.3	6.4	87	103	9	37	158 2	4		e 0	3	9	.0 1.	9
92	63.		~	0	00	2			16	105	119	m	60	9	54 3	9	3	4	.1 1.	•
27	63.		~	-	00		9	•	98	100	117		165 2	04 2		9	4	4	.0 2.	
	60.	_		0	00	92.5		9.5	84	104	118	144 1	4	3		e 0	4		,7 1.	
60	63.	.019	-	2,81	66	8	96.4	_	90	106	119	131 1	165 2		•	17 3	4	12 1	.0 1.	0
30	60.	_	2	9	00	CV	96.3	9.6	88	101	_		149 2	0	80	60	C.	80 1		
31	49	_	***	0		0	96.2	9.7	8 2		118	147	-	S		3	m		9 2.	
IVERAGE		1 .013			100.4	92.1	96.3	9.6	89	103	117	139 1	164 2	16 2	59 3	18 3	47 3	94	. 6 1 .	_
ES 6	7																			

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

DIST. 2 MID-ATLANTIC CDAST R.I., CONN., N.J., DEL., MD., VA., CENTRAL AND SOUTHERN N.Y., AND EASTERN PA.

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ITEM		ż	2	GUMA	LEA	OCTA	NE NUM	HER	RVP,			0	DISTILLATION	ATIL	•	ASTM	080			
_	SAM-	ASTH	ASTM	ASTH	ASTM	RESA	MOTA	R+M	ASTM	TEMPE	RATUR	اسا	00)	E C	TED 1	10 76	MM O	(9H		
	W L	28	12	0381	052	ST	S		32			PER	CENT	EVA	PORAT	TED	I		RES	LOS
		0.	M M	S M C	9/9	0	35	2	LB	186	5 1	0 20	30	50	7.0	06	9.5	EP	×	34
32		61.1		8	1.97	95.0				90	6 1	9	7 15	2	1 256	348	س	409	7.0	1.1
33	0	61.1	0.044	2		10	9			89 1	4 1	8	8 16	20	9	34	\sim		1.0	1.7
34	28	58.7	.030	6	2.01	94.6	86.6		9.1	92 1	-	21 14	3 16	7 22 1	28	2 352		416	•	1 . 7
35	N	63.1	.030	2	4	4	7.	6.06		96	0 1	0 1	7 15	-	S	33	~	412		1.5
36	6	59.4	.022	•		S	80	-			0	4	5 15	2	4 302	2 356	378		. 7	
37	_	61.9	.034		4			9006		91 1	6 1	9	9 15	20		3 351		411	1.0	
38	8	60.5	.056	-	.2	4		0		89 1	5 1	8	7 15	20	4 269	35	382	-		1.7
39	2	61.1	.032		1.56	5	. 9			90 1	8 1	1	0 16	20		32	355	394	. 7	
40	4	59.9	.022		7.	4	-	-		89 1	3 1	6 1	6 15	20	9		~	-		
41	0	60.5	.025	2	-	4	9	0		90 1	7 1	0 1	1 16	21		ø	373			
42		63.4			3.05			0		92 1	2 1	25 14	6 16	20	5	c.		420	6.	
43	_	60.3	.021	_	5	٠ د	7				0		8 15	20	27		~		6.	
44	_	9.09			.2	4	9	0		90 1	0 1	2 1	2 16	21	27	35	390		0	
45	_	61.8	.048					90.7			6 1	9	9 1 6	20			381	417		
9 4	_	62.1	.036	~4	-	10		•			9	8 1	7 15	6	25	33	370	-	1.0	
47	E	6.09	.034	_	.2			0		90	7 1	0	1 16	20		3 345		414		
40	_	61.9	.024	-		4	-	0			5	8	7 15	19	24	33	9		1.0	
49	7	61.6	.088	~	2.86	N)	86.1	90.0	6	90 1	7 1	9	7 15	6 20		2 347		412		1.7
AVERAGE		61.1	.036	-	2,35	94.7	86.9	8.06	9.2	91	07 1	19 13	9 15	9 20	5 26	5 345	376	412	0.	1.6

TABLE 3. - MOTOR GASOLINE SURVEY, SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

2 MID-ATLANTIC COAST--CONTINUED R.I., CONN., N.J., DEL., MD., VA., CENTRAL AND SOUTHERN N.Y., AND EASTERN PA. DIST.

		8	7	E	EA	OCTA	NE NUM	HER	V _P			01	STILLA	LATION		ASTM	080			
	¥	ASTM	ASTM	ASTH	ASTM	ES	01		ASTM	TEMPE	RATU	RE,		RREC	ED		NH OS	HG)		
TEM	PLES	28	12	38	52	ST	ASTH	8 8	32			PER	CE	EVA	PORA	TED			RES	105
		PI	MT X	E		0908	35	2	LB	186	5 1	0 2(0 30	2	7	06	95	EP	*	×
50	0					01.	8	. 9		~	-	8	3 1	8	9 26	33	36	40	0.7	2.0
51		3	-	2	.3	0	2	.0		0	•	8 1	₩	0	8 24	30	33	37		1.7
52	58	-	0	2		66	91.8		6.0	92 1		23 14	44 10	66 21	6 25	9 322	352	396	1.0	1.5
53		3	-			00	2	•		-	~	50	2 2	3 2	1 25	32	35	40	1.0	1.8
54		7.	0		6	01.		•		4	444	16 1	0 1	8 2	2 28	32	34	39	œ.	
55	22	6	-		4	0	•			~	-	19 1	3 1	0	7 27	32	35	പ്ര		1.4
26			-	-	*0	00	8	9		0	~	19 1	3	0 2	6 27	33		40	1.1	
57		-		0	4	000	-	•	6	~		19 1	3 1	7 2	6 26	32	34	39		
NO.		0	-	-	7	00	•	Š		0		17 1	9 1	2	4 26	33	36	40		
59		-	-	6 7		00	-	'n		8	-	19 1	3.1	9	7 25	31	34	40	1.0	
9		5	-	-	~	01.	-	9		6	-	20 1	7 1	6 2	1 27	33	34	38		
6.1	67	6			-	00	2	9		0	444	21 1	4	8	6 2 8	34	36	41	.8	
62	10	. 6	.015	-	6	01.	-	9		6	-	21 1	8 1	50	0 27	32	35	39	80	- 10
63		-			6	00	0	.0		0	***	28 1	8 1	0 2	7 25	33	36	40	8.	
64	12	6	-		0	00	2	9		th.	-	18 1	2 1	7 2	1 26	33	36	40	6.	
65		6	-	-	-	66	-	'n		0	~	19 1	***	1 2	3 26	32	35	39	1.0	
99		0	-	-	6	00		9	0	0	ded	18 1	-	6 2	7 25	33	36	4.1	6.	1.9
67		8	0	2	6	00	2	9	0	80	~	14 1	5 1	6	5 26	32	35	30	1.0	
8.9	17	53.8	.005	-		101.5	0	9	10.0	~	102 1	1.8	7 1	0	4 24	30	3 332	37	•	
VERACE		0	.014	-	~		91.8	96.2	9.6	68	-	19 1	42 10	68 22	1 26	4 324	35	3 397	0.	1.7

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970

ND EASTERN TENN.	REGULAR-PRICE GASOLINE	DISTILLATION, ASTM	TEMPERATURE, F (CORRECTED TO 7	PERCENT EVAPORATED	MG G/GAL 0908 D357 2 LB IBP 5 10 20 30 50 70 90	90 111 124 146 165 208 259 34	1 1,91 94,8 86,3 90,6 9,4 91 106 119 139 162 211 272 350
TENN	R-PRI	RVP,	ASTM	0323	LB	00	9.4
STERN	EGULA	BER	R+M	:	~	9006	9006
AND EA	œ	NE NUM	MOTA	ASTA	0357	86.8	86.3
ALA.,		OCTA	RESP	ANA	0908	94.4	94.8
FLA.s		LEAD,	ASTM	0526	G/GAL	2,23	1.91
GA.,		GUMA	ASTH	0381	Ü		-
DIST. 3 SOUTHEAST N.C., S.C., GA., FLA., ALA., AND EASTERN TENN.		_	SAR- ASTE ASTE	D1266	API	•	18 59.8 0.038
S S D U I		GR.,	ASTE	0287	API	61.2	59.8
÷ - S			SAH-	PLES		2	40
10				TEM		69	02

		œ	7	E S	EA	DCTA	E L	BER	>				DISTILLATION	LLAT	ION	ASTR	M 086			
	SAM	ASTE	ASTE	ASTE	ASTM	ES	01	R+H	ASTM	TEMP	ERAT	URE	F CC	ORRE	CTED	10	760 M	N HG	_	
ITEM	E L	28	12	38	52	ANTE	ASTM		32			Ь	ERCEN	IT EV	APOR	ATED			RES	SOT
		۵.	j	9	9/	0	35	CI	LB	9.0	S.	10	20	30 5	2 00	0	95	EP	×	34
69	2				2,23		9		0.0	06		47				59 3	0 3	8 41	40.7	-
20	10	6	0.038		0.	4	. 9	0	9.6	91		0	0	9	-	72 3	0 3	0 7 6	-	
7.1	28	0	.058	4	60	4	7	0					-	161 2	0	69 3	45 3	7 41	1.0	
72	15	2	.036				7	91.1		9 6	108	120	60	99	03	65 3	34 3	1 40	-	1,
73	27	-	.025	~	. 3	4	. 9	0			0		gret .	09	0	60 3	54 3	6 4		
74	~	1.		8	.2	50	. 9	0	•	06			2	56	94	58 3	50 3	8 42		-
75	60	61.5	2		2.57	94.8	87.2	-	9.1	91	108	121	141	161 2	0.5	9	43	7 41		0 2.0
16	020		-	N	9.	4	-	91.2		96			_	_	0		0	4 41	-	-
11	2	6	-	-	5	50	~	-		06	0				12	\sim	44 3	6 41	5.	9 2
78	36	0	(2)				86.1				0			~	16	6.8	42 3	2 40	-	-
40		-	3	-	5	4	. 9		•	06	105			60 2	0	9	52 3	3 42		-
80	-	2	2	-	. 3	4		-					140 1	58 2	01	20	18 3	2 42	-	
81	10	-	4	•	4.	N)	7	91.2		93		123		0	00	5	35 3	9 40		-
62	•	0	3		.5		86.6			92		125	9	90		10	45 3	3 41	•	1.
68.3	•	-	4		•			0					4		02	S	43 37	8 41	5 . 5	-
8	~	1.	10			4	. 9	9006		9.5		121	-	m	03	SO.	42 3	4 41	-	2
8.5	12	-	3	0			9	0		91			0	161 2	-		47 3	3 41	•	-
98	9	1.	3		5	4	-			06	109	122	0	62	0	63 3	40 3	0 41	2	
87	9	0	.087		3.27	94.8		6.06	4.6		109	127		172 2	12	57 3	4	3 41	•	1.
88	19	2	3	e	•			6.06		9 6	110	121	136 1	51 1			41 37	0 4 4	8 1.1	-
AVERAGE		61.2	.037		2,55	94.6	96.9	8.06	9.2	92	109	122	-	161 2	205 2	61 3	42 37	5 41		9 1.
PAMBI FE	0 6 6		ŀ														1			1

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 3 SOUTHEAST -- CONTINUED
N.C., S.C., GA., FLA., ALA., AND EASTERN TENN.

														1							
		œ	SULF	5	•	DCTA	N N C N	BER	Λ				DIST	TILLATION		AST	TM 0.8	9			
	SAR	ASTH	ASTM	ASTM	ASTM	ESP	MOT	X+X	ASTM	TEMP	ERAT) L	2	CTE	2	760	E E	6)		
ITEN	PLES	28	12	38	52	S	S	:	32			٩	CE	TE	APO	ATE			œ	ESL	0.85
		۵.	-	Ð H	9	0908	35	2	87	186	2	10	20	0		0	6 06	5 E	a.	×	34
89	~	0			80	0		. 9		96	112	124	4	7.1	50	6.4	34	899	-	1.8.1	
06		4	•	-	4	66	3,	9		92	109	α	-	63	17	52	20	V.	~	. 6.	. 3
16	28		.018	2	2.87	1001	92,3	96.2	0.6	06	108	121	140	160	210 2	251 3	309 3	3.5 5.5	75	. 1 .	. 3
92		-	01	-	0.	00	2	. 9		06	102	113	58	4 8	22	74	22	4	9.6		
93		80	00	~	9	00	2	• 9		93	110	125	20	9 2	56	69	31	9	0		1.6
9.6		-			2	0	2	9		98	0	94	34	54	12	6.4	92	58	394		1.7
95	***	0	-		0	00	2	• 9		06	101	2	4	64	60	58	33	9	0		
96	20	0	00	2	. 8	00	2	9		93	0	C	40	59	03	56	34	01	407 1		
16			0	2	0	00	2	.0		06	0	***	41	62	15	24	56	62	0		1.9
96		2	-	~	~	00	2	. 9	9.1	66	$\overline{}$	C/I	20	74	15	51	60	40	0	-	
66	12	6	0		-	00	2	•		89	0	4	3.8	09	18	99	25	51	0	~	
100		2	,024	~	0	1001	2	96.5	9.1	98	96	109	60	50	60	49	01	~	356 1	0.	
101	2	4	02		-	01.	2			88	0	C	20	81	30	63	10	0 4	0		
102	80	0	01			00	S	•		87	0	-	41	99	16	58	19	4 8	8	6	1.3
103	4 D	6	0		6	00	2	. 9		87	0	•	35	24	19	63	50	ئ 15	0		
104	2	80	0		۳,	66	2	.0		97	0	2	40	6.4	23	72	24	8 4	00	c	
105	12	0	02	0	6	00	2	. 9		06	0	-	39	61	18	99	28	48	0		
106	6		00		3.06	0	3.	. 9	9.5	06	106	\rightarrow	38	09	10	58	32	62	976		
101	~	6	.013	6	5	00	2	. 9		87	0	116	_	68	24	68	19	41	8	80.	9.1
108	19	4	0		0	01.	9006	96.1		89	105	122	0	82	30	5.5	10	39	~	0.	
FDACE		60.0	.013	2		100.3	92.4	96.4	9.3	06	106	119	141	164	17	62		349	393	6.	1,6

AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED - MOTOR GASOLINE SURVEY, SUMMER 1970 TABLE 3.

		-		Œ		-																		
			HG		F P	-	9	-	413	406	406	0	-	-	-	S		3	0	0	9	414	8	426
		80	E		95	30	CV	~	~	372	•	~	30	~	~	0		30	~	0	•	370	30	~
			760		06	S.	0	4	4	339	(T)	4	5	4	4	M)	8	50	48	9	B	337	4	344
		~	2	ATE	10	99	54	529	193	63	256	64	576	68	893	77		27.8	~	~	9	260	9	
MD.		ION	CTE	APO	0	03	10	66	01	0	40	80	17	10	10	13		0.5	10	0.5	90	07	07	95
M L				u	0 5	70	cu	6	9	59 2	60	6	7	20	~	40		0	6	60	0	61 2	~	2
R →		STI	-	C	3	7	6 1	5 1	7 1	9 1	6 1	3 1	4 1	3 1		5		2 1	2 1	9	7 1	0 1	0 1	6 1
Q			- 1	PER	20		****	**	***	8 13	-	~	-	***	-	-	•	-	~	-	-	9 14	-	8 13
AND	INE		TUR		10	11	12	11	**	11	11	12	12	12	12	1		22	12	11	11	11	11	11
K.	ASOLIA		PERA		S	101	108	104	108	106	102	111	109	108	108	95	a					106		
8	n G		TEM		186	86	88	93	92	06	92	96	92	92	92	83		60	93	90	86	06	89	92
ASTERN	PRIC	2	S	32	L 89	-				7.6						4.0						0.0		•
	AR-	Œ	«	_	_					~					0	6					©			5
A d	EGULAF	3E.R	÷ *	8	8	91.	91.	0	91.	90	91.	91.	90	90	0	90	90.	90.	0	0	90.	0	90.	90.
TERN	œ	3	010	N I	157					7.0														
WEST			¥ :							9														
•		2	RESP	2	06	s S	4	5	4	94.3	4	5	4	4	5	4	9	4	4	4	4	4	Œ	4
2		_		_			_					-	_			-						_	_	_
STERN		LEAD	2	22	5/	•	2.69		•	2.25		0.	۲.	4.	5	'n		*	~	•	6.	E.	J.	
N M		1	Ξ;	9	9		-							-		-		-				-		
2 4 •		0.5	× (E C	1	_	•	•	-	•		_	~	_	_	•	•	•	_	-				
H.		in the	I '	99	×	30		_	38	029		18	10	24	38			34	21	44	61	4.1	31	37
ALAC 0, W			AST	-	E	0.0	_	•	•	•	•	•	•	•	•			•	•	•	•	•	•	•
APPALA OHIO,		25		20	Q	2	2.5	2	$\overline{}$	2.1	8	0	6	0	0	6	3	-	0	0	•	0	-	2
47			8 (n		9			_	15 6	m		60	2	4					9	_			6
DIST.			NAN .	7																				
0			:	F M		60	10	11	12	113	1	15	91	17	200	19	20	21	22	23	24	25	56	27
				7		gred.		-	-	~	-	-	-	-	-	-	***	-	-	**	-		-	~

LOSS

RES

1.1 1.5

1.0

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1.1

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250 250 250 250 250 250 250

136 140 140 136

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1.08 1.97 2.32 2.58 2.21 2.34

0000 0000 0000 0000 0000

60.1 60.6 61.5 61.5

212

AVERAGE

342

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160

119

106

9.6

90.8

87.1

94.5

1.0 1.4

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TABLE 3. - MOTOR GASOLINE SURVEY, SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

& APPALACHIAN -- CONTINUED OHIO, W. MA., WESTERN PA., EASTERN KY., AND PART OF MO. DIST.

	SHIN.	4	A+20	MIN SWA	0 40	97			-	1 6 7 1	NOTES LITTOR	TON	AC	TM DB	4		
ìx	ANTA	ASTR	FSP	1	3	ASTE	TEMP	ERATU	RE,) L	CORRE	CTED		9	DH MM		
9	0381	52	ASTM	ASTM		32			PE	RC	IT EV	VAPOR	1	1		A P	S L0
	D X	9/	06	35	~	LB	1 B P	S	10 2	0	30 5	50 7	0	6 0	S EP	24	34
10	-	7.	00	m en	9	•	91			2	49	90	64	13	47 3	200	9 1.
36	8	7	00	C	. 9	9.7	87	_	23	8 4	73					7	
		3,42	0	è	96.5		9 8	S	118 1	37	9	2	99	16	38 3	4	
	•		00	91.7	95.9	10.4	06	103	115 1	34	56	206 2	46	13	47 3	3 1.	2
33			0	2	96.3		06			_		1.4	52	C	61 4	6 1.	-
12	•		.66	(L)	9.96	10.1	87		119 1	2	6.8	0		16	69 3	2 1.	0 1.
	8	6.	00	3,	. 9		88	9	20	42	62	90	09	34	60 3		
07		6.	0	N	• 9		6	2	28	54	81	59	72	33	57 3	7	-
600	~	4.	66	2	. 9		91	_	C)	44	67	22	64	-	47 3	2	-
12	-		0	-	. 9		06	~	2	47	4	23	58	12	46 4	4 1.	-
-	0	9.	99.	2	9		91	0	2	80	73	22	99	3	64 4	4 1.	0 1.
	8	3.02	0	3	7.96	10.5	88		111 1	34 1	~	16	S	-	165 40	CA.	-
		. 4	000	5	•								8			_	•
m	•	9.	000	2	• 9		80			'n	'n	96	4 6	38	74 4	•	•
013	4-4		0.	2	. 9		89	0		38	0	60	48	12	43 3	0 1.	-
0	0	6.	6	C	5	0	06	4	21	9 4	70	20	69	40	75 4	6 1.	2 .
-		٤.	6	۵.	• 9		98	0.5		49	4	14	45	1.8	57 3	ın.	-
003	•	- 9	6	6	96.6	10.8	6	106 1	119 1	42 1	67	215 2		18	349 39	6	9 2
~	8	80	1001	3	9	0	87	0		9	0	14	61	42	79 4	6	-
011			101.1		95.7	10.4	68	103	118 1	45	177 2	0	54	312 3	138 37	9 1.	0 2
017	-	2,92	100.1		96.3	8.0	89	106	120 1	43	167	15			156 40	0	9 1.

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970

AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

DIST. 5 MICHIGAN

S N
Z
0
ASOL
GA
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CE
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2
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AR
3
5
9
REGUL
Mar.

	0.88	»e	6 2	4.	4.	0.	9.	8.	6.	2	80	63	5.5	7.	0.	0.	9.	.2	ec	0.		.7	.5
	S		2	1 9	8 1	0	8 1	2 1	-	80	7 1	9 1	9	~	0 2	2	60	8 1	-	5 2	2	8 1	7 1
	RE	94	0	•		-	_	•		•				_	-			•	-				
3		EP	446	410	424	422	408	3	382	0	0	417	9	41	4 4	42	40	42	41	39	43	388	414
980	E	56	400		368	386				~	\sim	362	S	~			370		~	366	0	350	375
TM	20	06		B	N)	351	m		•		3	5	C		4	4	3	4	4		5		340
W F	A	20	253	5	-	259	9	~	4	S	S	~	5	~	9	4	264	~	S	9	S	5	260
	- 0	20		ō		198		231		-	0	216	0	-		0	210			216		0	208
10	니니	30	~	2	0	154		2	_					1 0	9	9			S		9		164
DIST	RCE	20		4				in		4		4	4	4						4		4	143
Li Ot	PE	0	CV	4	10	18	0	4	20	22	20	2	0	23	N)		2	9	4	20	4	20	122
D A T	Z Z	5 1	06 1	12	90	0.0	20	0.5	90	60	20	60	20	80	00	05 1	90	20		04	=	90	90
1071		9.6		CV.		88 1	~			90			m				2			•		E	91 1
Q +	- 0	1 8		0		۳,											۲.		.2			-1	5.
> 0	0 0		0		-	2			~										-				6 8
HER		~	•	0	-	91.	-	•	0	evi	0	0	0	0	0,	0	0	0	0	•	0	0	06
NUM	STE	35	. 9	9	7	~	7	7	7.	8	9	~	9	9	9	9	. 9	, 9	9	~	9		6.8
Z	I A		10 00	60	_	*0	_		_		_	4			80		5	_		00	_	80	8
00	AST	06	4	4	2		4	50	⁶	• 9	2	4	'n	10	5	4	4	4	4	4	4		94.
AD	E 90	GAL	0.2	0.4	76	9.0	14	91	61	7.8	0.1	99	6.8	50.0	64	87	9.6	15				12	54
LE	2 2	3																	*	3		6	2.
E L	0381	S I	-			-		••	0		-	~	8	m	-	~			8		0	-	-
L 3	99	14	090		C	030	4	9	$\overline{}$	_	2	16	3	~	2	-	-		_		120	~	39
S		3	0.0	_	•	•	•	•	•	_	•	•	_	•	•	•	•		•		0.	•	• 0
2 5	0287	0	0	2	-	62,3		8	3,	2	1.	6	-	6	0	•	0	6	•	-	62.4	0	61.0
3	PLES		2	6	90	-	4	••	0	2	ī	0	23	€0	-		10	m	m	e	س	13	
	TEM		148	149	150		152	153	5	155	S	151	5	5	9	9	162	163	64	165	991	9	ERAGE

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970

AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

DIST. S MICHIGAN--CONTINUED

GR., SULF. GUM. LEAD. DCTANE SAH. ASTM BLES D287 D1266 D381 D526 ASTM AS 3 63.2 0.020 1 2.89 99.7 993 13 60.0 0.020 1 2.89 99.7 993 15 62.2 0.020 1 2.89 99.7 993 15 62.2 0.026 1 2.89 99.6 99.6 99.6 99.6 99.6 99.7 993 15 62.9 0.03 1 2.62 99.9 99.9 99.3 99.3 99.3 99.3 99.3 99.
A STR

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970

AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

REGULAR-PRICE GASOLINE

DIST. 6 NORTH ILLINOIS NORTHERN ILL., EASTERN IOWA, AND WIS.

		œ	SULF	X S	EA	OCTANE	まつと	BER	4			0	DISTILLATION	LATI	«NO	ASIM	080			
	SAM	ASTM	ST	ASTM	ASTM	سا	MOT.	R+M	ASTE	TEMP	ERATU	REP	F (COR	JRREC	RECTED	7 01	WW 09	(9H		
ITEM	_	28	01266	38	52	ASTR	ASTR	9 9	3			w	RCENT	T EVA	PORA	150			RES	L055
		Q.	H	5 X	G/GAL	0	0357	2	LB	186	5 1	0 5	0 3	0 50	02	06	56	d.	84	₩
190		2	0.036	•			86.7	-		96	111 1	122 1		-	80	6 33	6 371	406	1.1	1.5
191	15		.037	7	2.21	_	87.5	-	6.8	95	-	122 1	40 1	8	12 25	7 33	1 365	4	1.2	1,3
192		-	.036			6	7	0		63	80	121 1	9 1	8 2	1 2	4 32	4 350	38	1.0	1.5
193	~	61.5	.051	*			87.0	91.2	8.7	88	107 1	119 1	36 1	54 19	9 2	4 33	3 304	39	00	1.7
194	2		.076	•	4.			0		92		119 1	9	12	9 2	4 33	5 365	397	1.0	1.8
195	14	-	.031	-		4		0		92	107 1	120 1	8 1	9 2	4 2	7 32	34	c.	6.	1.6
196	•0	0	690.		5		9	•		87		117 1	5 1	2	3 2	3 35	0 384	41	1.0	
197	e	3			.3	4	86.2	0		68	104 1	112 1	-	9 1	0 2	2 33	8 3/4	419	6.	2.1
198	60		.024		6.	ŝ	-	-		18	103 1	116 1	0	5 2	1 2	6 3	6	4.1	80	
199		0	.045	~	. 7	5.	9			8 5	103 1	17 1	7 1	5 2	4 2	2 3	1 372	40	1.0	
200	~	0	.027		7.		-	-		49 64		110 1	**	56 21	4 2	4 35	0 381	4	1 . 1	1.9
201	9	-	.059		س	5.		0		06	109 1	121 1	0 1	0 2	5 2	8 33	3 (404	6.	1.4
202	9	0	.066	-	2.59	95.1		6.06	9.6	87	104 1	120 1	9 1	61 21		3 34	0 370	014	1.0	2.5
203	_	-	.062	0	5	S		0		06	106 1	117 1	37 1	-	9 2	9	8 390	4	1.2	2.0
204	16	•	.078	m	• 6		•	0			109 1	121	41 1	61 20	4 2	4 32	5 355	5 393	1.1	1.6
AVERAGE		61.1	,050	2	2.56	6 76	86.8	6.06	9.4	06	106	118 1	37 1	57 20	5 25	9 33	8 369	404 6	1.0	1.7

TABLE 3. - MOTOR GASOLINE SURVEY, SUMMER 1970
AVENAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 6 NORTH ILLINDIS -- CONTINUED NORTHERN IND., NORTHERN ILL., EASTERN IDWA, AND WIS.

		GR.	SULF	SUN	لما	OCTA	DCTANE NUMBE	BER	RVP			٥	DISTILLATION,	LLAT	NOI	ASTM	080			
	SAH	-	ASTM	ASTH	ASTM	RESP	MOT	X+X	STM	TEMP	ERATURE		F (C	CCORRECTED	CTED	10 7	M 09	M HG	_	
1 TEM	PLES	0287	01266	0381	S	ASTM	ASTR	1	0323			PE	ERCENT	LEI.	VAPORA	TED			RES	S L.055
		API	M T M	E G	-	0	0357	~	L8	186	5	10 2	0.3	0 5	0 4 0	06 0	5 0	E E	24	≫
205	12	63.6	0.006		0.	90.66	•	96.2	9.3	9.1	108 1	120 1	40 1	2	09 25	50 32	8 36	3 4	6 1.	1.4
206	15	59.9	.021	-	2.64	60.66	92.7	96.3	9.5			124 1	_	178 2	0 2	4	3	9 4		2 1.6
207	14	61.1	900.	•	2.97	99.2	92.9	96.1	10.5	91	4	121		8	18 25	ص ص	2 35	3 38	7 1.	2.1
208	2	61.2	.024	8	3,13	6.66	92.8	96.4	80.00	91	107	120 1	42 1	4	207 24	44 30	09 34	6 38	•	8 1.7
508	'n		.033			9.66	93.2	96.5	10.1	88	105 1		40 1	66 2	5 2	6 3	35	0 3	2 1.	0 1.6
210	15	61.7	600.	N	2.57		91,9	95.6	9.5	8	108 1	124 1	47 1	1 2	09 24	12 30	1 34	66 0	7 1.	1 1.8
211	•	60.09	.017		2.93	7.66	92.9	96.3	9.6	88	N	120 1	49 1	~	4 2	9	9 35	8 39	. 9	3
212	~		8		3.09	99.5		96.5	10.0	88	1001	115 1	41 1	9	21 25	9	7 34	1 3	60	8 2.2
213	(4)	62.6	000.	8	2.90		93.0	96.6	9.5	68	2	121 1	46 1	1 2	9 2	39 30	E.	5.3		7 2.
214	-	60,2	.013		2,77	99.5	93.0		10,3	88		116 1	40 1	N	19 26	2 3	33 36	2 41	4 1.	0 2.0
215	E	62.3	000.		2.91	99.8		96.4	10.3	87	106 1	119 1	43 1	8	2 2	5	m	9 3	2	9 2
216	9	62.4	.024	•	2.99	100.0	93.2		9.5	68	110 1	122 1	6 1	71 2	14 25	0	7 36	2 4	5 1 .	0 1.6
-	40	62.3	.022		2.70	90.66	92.7	96.3	10.0	80	110 1	123 1	51 1	79 2	8	57 32	1 3		•	9 2 9
218	~	60.4	.007			90.4	92.7	96.1	10.2	06	رما	121 1	51 1	82 2	0 2	ധ	4 36		5 1 .	0 2,2
•	15	60.7	.013	2	9.	9.66	91,8	95.7	6.3	93	108 1		4	7 2	14 25	54 31	9 3	8 38	9 1.	1.1.
AVERAGE		61.5	.014	-		7.06	95.8	96.3	7.6	06	106 1	120 1	45 1	71 2	16 25	52 31	8 35	2 39	6 1.0	0.2 0

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

7 CENTRAL MISSISSIPPI MESTERN KY., SOUTHERN IND., SOUTHERN ILL., AND EASTERN MO.

		œ	H	3	EA	DCTA	NE NUM	BER	7				DIST	ISTILLATION	ION	AS	TH D8	0		
2	SAK	ASTE	ASTE	ASTH	ASTH	RESP	MOTA	R+K	ASTH	TEMP	ERAT	URE	F (ORR	C TE	1	160	E IG	1	
LEH	LES	D N	12	30	22	S	S		32			0_	RCE	A.	APOR					S LOS
		۵.	-	Z Z	5	06	35	2	L.B	186	S	10	20	30 5	0	6	0	S EP	**	24
CV		0				•	7.	94	•	108		4	4	CVE	38	06	50 3	4 4	0	1.
O		-	.030					-		0	-	6	0.4	69	20	11	51 3	4	1.	-
C		3,			~	'n	9	0		96	-	2	38	55	03	59	33 3	4	2 1.	
~		5	.026			4	7.		8.6	96	114	128	146	168 2	0.8 2	52 3	30 3	65 39	2	8 1.
O		0	.058	0	0			-			-	9	9 6	99	10	64	36 3	4		~
0		0	0	-	2	48	7.			96	111	123	42	161 2	90	62	27 3	9	2	
C4	_	è	8		0	4	9	0										•	•	•
C		-	8					0			108		0.4		02	56	30 3	2	80	
8		0	3		0	4	9	0		97	114		9	67	1.4	61	39 3	4		-
C		0.	-	~	~	4	9	0			-	9	47	29	11	69	47 3	4	6 1.	-
230	~	61.1	.031		0.	94.5	87.9	91.2	9.0	102	116	132	4	~	25 2	0	56 3	90 43	2	9 1.
9		0	9		2	4	7.	0		9.6	•	80	9 4	9	12	99	38 3	4		-
(2)		0	67					0		9.6	und		9	99	10	16	66 4	1 4		-
3		-			~	4				9.5	111	CV	37	~	10		42 3	9		
m	_	•			*			0		92	101		39	59	0.4	61	50 3	3 4		-
9		2	.020					91.5		100	3		9	0	16	09	32 3	4	0	-
(L)		0	4	0	.0			-		91	108		42	64	11	63	43 3	4	N)	-
3	_	0	•		4	4			•	92	113			9	15	78	60 3	4	4 1.	2
(C)		-	.065	~	40			0		86	111		141	6	00	8 4	27 3	1 3	9	-
AVERAGE		61.1	.035	-		94.5	87.1	8.06	6.8	96	114	127		167 2	113 2	66 3	42 3	73 41	0	9 1.

DIST. 7 CENTRAL MISSISSIPPI--CONTINUED

WESTERN KY., SOUTHERN IND., SOUTHERN ILL., AND EASTERN MO.

		œ	-	GUM,	EA	OCTA	NE NUM	Ð	VP				DISTI	ILLAT	TON	ASTE	080			
	¥	S	S	ASTH	ST	ES	01	R+K	ASTH	TEMP	ERATU	RE	~	œ	CTED	7 0 7	₩ 09,	DH M	_	
TEM	PLES	0287	01266	0361	52	ASTH	ASTH		32			P	ERCEN	IT EV	APOR	ATED			RES	LOS
		0.	-	O I	G/GAL	90	35	2	1.8	186	2	10	20 3	9 0	1 0	06 0	56 0	EP	*	96
~	'n	9	- CV		9	0.	8	40			~	129 1	gent	73	17 2	9	9	9 38	•	***
4	0	2	CV			0	93,2	.0	9.4		4	6	~	9	15 2	0	13	38	8.	1.
4	m	.0	4		10	66	CV.	96.4			60	4	3	82	212	6 3	4	2 42	-	1.
242	0.	63.6	.016	9	2.96	00	93.2	7.96	9.6	6 9	114	27	150 1	172 2	13 2	m		9 38	5 1.0	1.2
4	*0	5				00	2	. 9			•	10	0	20	07 2	5 3	6 3	7 40	-	1.
4	6		.041			0	5		9.1		118	3	0	9.4	32 2	0 3	6 3	0 38	•	7
4	13	6	.030	-		00	5	9			116		60	9.4	25 2	0	6 3	1 40	•	
4	**	0	.001			6	2	S			108	50	9	~	26 2	8	9	5 38	•	2
4	N	0			9	00	CV	9				8							•	•
4	m	-	•		0	0	E	9		92	4	24	4	_	96 2	52 3	2 3	6 4	•	1.
4	9	6	.034	8	0	00	2	•		93	'n	31	29	84	19 2	50 3	2 3	3 4	-	
*	12	0	900°	0	0	6	91.8	'n		40	C	~	-	72	13 2	49 3	0 3	6 3		-
10	60	4	.007	8	6.	0	8	•		100	22	3.8	6.5	9 8	202	56 3	6 3	9	•	-
10	m	3		•	6	6	3.	. 9		98	_	21	12	99	11 2	47 3	5	1 4	•	-
N	m			8	0.	6	2	• 9		86	03	16	37	63	17 2	57 3	1 3	8		
RU.	-	5	0	2	4	00	3	9		88	2	-	~	61	04 2	34 3	2 3	6 3	-	2
10	6		.038		. 7	0	S			96	4	3	CV	68	28 2	68 3	5	8	•	
S	0		.001	0	60	6	8		10.1	93	110	126	148	171 2	213 2	54 3	28 36	64 40	1 1.0	1.5
1	m	~	8		•	0	-			98			N	18	30 2	78 3	2 4	0	•	1.
10	-		.012	~		9.66	-	'n	9.3	91		124		~	16 2	53 3	9 3	9 3	•	
AVFRAGE		61.6	020	•		100.0	92.6	96.3	9.2	92	113	128	153	175 2	217 2	55 3	23 35	55 39	6.	1.

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

. 8 LOWER MISSISSIPPI MISS., LA., EASTERN AND SOUTHERN ARK., AND WESTERN TENN.

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		ě	SULF	3	EA	OCTA	ANE NUM	BER	VP			0	ISTI	DISTILLATION	NOI	ASTE	080			
	SAM	ASTH	-	ASTH	ASTH	ESA		X+X	ST	TEMP	ERATU	REP	F CC	ORREC	TED	10 70	60 M	W HG		
TEM	PLES	28	01266	38	C	-	ASTH	:				9	RCEN	T EV	APORA	TED			RES	FOS
		a .	-	D I	G/GAL	0	35	2	LB	186	5 1	0 2	0 3(0 50	0 70	06	62	EP	×	**
N)	15	3.	0.081	8	. 7	41						CV.		-		N.	37	41	0.9	1.6
9	•0	1.	•		3.10	4	•	2.06		66		28 1	5 1	~	2	8	36	4	1.0	1.0
9	m	1.			2.47	4	88.1		6.6			8	31 14	6 1	0	1	34	0 398	•0	1.
9	•0	•	9		~	3	•	0			109 1	5 5			2	6	36	4	6.	1.8
263	e	80.8	.039	8	2.52	94.3	86.7	90.5		92	110 1	24 1	45 10	N	14 26	~	36	6 411	1.0	1,5
9	15	0	.030	0	2.37	4						4	***	4	0	9	37	42	. 8	1.6
9	•0	0	.023	8	2,53	4					109 1	6	43 10	4	6 2	80	38	415	6.	1.7
9		•	.019			4	86.7				111 1	23 1	3 1	2	9 2	6	37	40	6.	
9	15	6	.056	B		4	-					26 1	5		3 2	7	37	4		
268	0	-	.015		2,51	4	86.8	8.06				3	4	6 2	8 2	60	37	41	•	1.5
569	m	•		8		47		90.1				0 1	1 6	0 2	0 2	0	37	4	-	
270	4	***	.011			4			0.6		110 1	 E	2 2		4 2	E -	38	5 410		1,3
271		0	.031	8	2.76	4						5	-	4	8	4	37	4	6.	1.
272	^	1.	.022		2.27	4	86.1	90.1		92		3 1	-	1 2	05 25	ы С	36	8 411		1.0
273	~	2				4	10			06		4		5	2	0	39	1 416	1.5	1.0
274	•	-			2.86	4	86.4	4.06		92		2 1	0	2	5 2	0	37	4.1	•	1:
275	17	-	.052		~	93.7				93	110 1	4	-	2	17 26	60	36	4	•	1.6
276	9	0			1.94		85.8	90.1		88		1 1	0 1	0 2	9 2	10	39	5 430	•	1.2
277	9	1.	•		2,26	93.6	85.9	89.8	6.5	96	115 1	-	0 1	7 2	1 2	7 33		8 411	1.0	1.
AVERAGE		61.2	.034	-	2.54	94.3	86.7	90.5	0.1	03	110 1	24 1	42 10	62 20	07 26	2 34	4 37	5 415	1.0	1

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

8 LOWER MISSISSIPPI -- CONTINUED MISS. LA. EASTERN AND SOUTHERN ARK. AND WESTERN TENN. DIST.

		GR.	SIII F.	GUM	I EAD.	DCTA	TANE NUM	BER	RVP			٥	ISTI	LLAT	DISTILLATION,	ASTR	M D86	•		
	7	5	1 10	ST	ASTM	7		R+X	ST	TEMP	ERA	TURE	F CC	ORRE	CORRECTED	10	760 M	DH MI	0	
TEM	P F S	0	01266	0381	1	15	ST	8 8	0323			PE	RCENT	TEV	APOR	ATED			RES	LUSS
	i B	API	H H	J	G/GAL	0808	0357	N	LB	186	N.	10 2	0 3	0 5	2 0	6 0	26 0	E E P	×	×
27.8		54.5	0.00A	2	00,		91.2	96.3	8.9	87			55 1		3.8	64 3	2 3	15 38	8 0 8	1.4
270					3.19	66	92.8		9.5	80	106	120 1	1 0 1	64 2		78 3	2 3	93 40	1.9	-
280	· "				3.20					06					96	50 3		e e	3.	1.5
281	•	-			0	00	2		9.6	92	110	126 1		68 2		62 3	7 3	96 09		
282	· m	•	~	8	3.16	00	2	96.4	6.2	63			153 1	0	22	59 3	38 3	4	•	-
283	15	2	.036	0	2.98	0	92.5	96.4	0.6		111	124 1	44 1	66 2	12	53 3	24 3	24 40	•	9 1.A
284		0	1		•	0	2	96.4				~		0	25	68 3	34 3	4	-	-
285			0		2.58	66	6			93	111	IU.	145 1	67	14	54 3	08 3	4		9 1.
286	1	0	0		90	0	· CV				~	(4)	4	-	12	52 3	14 3	е е	•	
287		2	-			00	-			0	-	e		99	60	50 3	29 3	4	•	-
288	-	0	4			000	-	9		0		0		~	33	70 3	46 3	7 4	-	2
280		0	C		•	00	2	40		0	-	10		4	24	69 3	31 3	8 4	-	-
000	- 2	6	5		3,11	00	2			0				4	22	65 3	30 3	1 4	•	-
201			036		•	0	92.4	9		•		_	145 1	7.1	16	53 3	36 3	8 4	٠ س	1.6
200		-			3.08	00	N	9		96	119	2		6.4	92	51 3	43 3	8 4	•	-
293	•	-	64		60	00	N	96.3	8.7	0	108	'n		0	21	583	41 3	2 4		-
294	17	61.5	010	8	9	66	92.7	96.3		66	110	126	149 1	7.1	-	49 3	06 3		-	0 1.
295		6		8		0	2		0.6	0	106				•	60 3	60	0	•	
296	40				2.91	66	91.7	95.7	9.4		118	133	154 1	4	13	56 3	21 3	5	-	1.0
VERAGE			.019	_		100.1	92.5	96.3	9.1	92	110	125	148 1	172 2	217 2	59 3	27 3	56 40	•	9 1.

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED 9 NORTH PLAINS MINN.s N. DAK.s AND S. DAK.

DIST.

REGULAR-PRICE GASOLINE

			SULF	GUM,	E A	UCTA	TANE NUM	BER	RVP,			0 1	DISTILLATION	LATI	A 4NC	STM	080			
	SAM-	ASTE	AST	_	ASTM	w		X+X	I	TEMPE	ERATUR	RE, F	CCORR	Lai	CTED T	10 760	N W	HG)		
ITEM	PLES	0287	D1266	38	52	-	S	:	3			PER	RCENT	EVA	VAPORAT	E D			RES	2807
		API	NT X	MG	G/GAL	0000	0357	2		186	5	0 20	30	50	10	06	95	ΕP	×	34
297	40	63.0	0.039		1.63	92.2	85.1	88.7	9.6	6.0	9 1	19 13	4 1	19	~	33	371	412	7.0	103
298	4	60.2	.109			92.3	•	88.4	4.0	91	105 1		157	20	0	354	384	425	80	1.7
568	10	62.2	.041				85.2	88.7	4 .	06	1111	~	9 15	19	8	س	368	407	8	1.5
300	0		.154	•	2.40		85.0	88.8	8,3	97	3 1	6 1	5 16	6 201	26	m	388	416	1.0	1.2
301	2	63.6		8	000		84.5	88.1	9.5		112 1	60	5 18	C	2	32	366	400	6	2.1
302	-	63.5	.001	es	0	C	2	88.5	8.7		0	24 14	4 16	19	9 237		310	367	1.0	1.0
303	m	61.8	.112		2.83		85.5	89.2	9.5	9.6	114 1	4	-	0	~	33	375	402	6.	1.1
304	6	-	.086	2	2	2	4	80	9.2		1	4	4 16	21	26	~	376		1.0	1.5
305	4	61.2	.105	-		CV	85.5		9.6	92	1001	0	8 15	9 20		35	380	416		1.6
306	50	61.6	.045			~	85.1	88.9	9.2	06	-	-	8 15	6 19	25	33	368		0	1.4
307	~	61.4	.078		2.51	N	S		9.5	86	-	15 13	3 15	2 19	5	6	374	399	6.	1.6
308	6	61.8	.095		2.95		86.7	90.1	9.1	9.4	5	5	3	0	1 248	33	371		6	1.6
309	E	63.7			1.76		85,3	88.9	8.6		112 1	10	5 16	0	23	~	314	356	9.	
310	gred	61.9	.051	~	2.80	~		89.4	9.5	96	7 1	20 13	6 1	8 20	2 261	34	374		1.0	1.5
311	4	62.0	.084		~	O	Š	88.9			9	9	5 15	0	25	34	360	410	1.0	2,3
312	11	63.6	.018		1.79		85.2	88.7	_	9.5	4	28 14	7		23	N	322	362	0	1.2
AVERAGE		62.1	.073	2	2.35	92.5	85.2	98.9	9.1	92	1101	22 14	1 16	0 20	3 254	331	304	401	6.	1.5
SAMPLES	73				1	ŀ									[

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970. AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

9 NORTH PLAINS CONTINUED	MINN. N. DAK., AND S. DAK.	
DIST.		

		GR.	SULF	SCE	ш	OCTANE	NE NUMB	BER	RVP,			٥	STI	DISTILLATION	- 1	ASTM	080			
	SAH-	ASTM	ASTE	ST	N K			X + X	STE	TEMPE	R	TURE	FCC	CCORRECTED		TO 76	NH OS	HG		
MAL	PIFS	28	12	0381	0.5	W	S	:	0323			PE	ERCENT	Lei	VAPORA	TED			RES	L055
		API	-	E	G/GAL	0060	0357	CV.		186	5 1	0 2	0 3(0 20	70	06	95	e G	×	×
313	9	63.5	0.030	•	2.75	0	2	95.7	6.8	06		-	9	0	2	63	6	4	6.0	1.6
314	•		•	-	100	0	•		•	0	106 1	5	3	0	8 2	0 325	(L)	407	1.0	2,0
	r wr	63.1	0.0	• •		90.2	92.7	40	6.0	90	114 1	-	55 1		9	e.	3	398	6.	1.4
316	0	62.5	.046		6	6	-	N)		93	114 1	0	100	9 2		8 341	36	4	1.1	1.5
317	0	2		8	2		91.6	95.1				23 1	5 1	2	2	31	m	39		1.7
318	-		.001	-		6		95.7	0.6	90	108 1	25 1		75 21	8 2	m	34	40	1.0	1.5
319	• •	4	0.054		3.11			97.3		N	116 1	32 1	5	2	9 24	1 30	en.	39	0	2,2
320	0		.008	•		6	-	95.1		N	110 1	26 1	51 1	4	5 25	0 32	9	4	1.0	1.6
321	d	6	.073	-		6	91.9			0	NO.	23 1	~	7	6 25	2 32	m	4 1	1.0	2,3
322	NO.	63.6	.030	•		0	2	10	8.7	68	110 1	23 1	***	0	24	6 31	35	4	1.0	1.9
323	-	~	.043	9	2	6			9,3	60	107	26 1	***	2	6 24	1 31	Š	0	6.	2.1
324	100		. 022		4	99.1					۳	16 1	***	2	7 24	6 32	35	40	.5	1,5
325	-				8	90.8			6.7	9.6	1001	123 1	~	7 2	9 24	4 31	3 345	36	•	
326	-	, eq	.041	~		40			6.3	88	104 1		0 1	5	50	4 32	35	4	_	2.0
327	4	-	0	(7)	in	99.1	-			06	110 1		5 1	2	1 25	6 33	36	4 1	1.0	1,8
328	11	NO.	.020	-	1.93	99.4	91.5	95.5	9.1	9.5	112 1	126 1	8 1	1 2	2	7 31	4	38	1,1	1.2
AVERAGE		2	45	2		99.2	92.3	95.8	9.1	06	109 1	125 1	51 1	76 21	15 24	9 32	2 357	402	6	1.7

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 10 CENTRAL PLAINS NEBR., CENTRAL AND WESTERN IOWA, NW MO., AND NORTHERN KANS.

REGULAR-PRICE GASOLINE

P S P S	ASTM			LEADA	DCTANE	AL NOMB	DER	KVP			0	DISTILLATION	LLAT	NOI	ASTM	086			
PLES	6	ASTM	ASTH	S	RESP		X+X	ASTM	TEMPE	RAT	URE,) L	CCORRECTED	CTED	TO 7.	O WM	4 HG >		
0	O N	01266	0381	0526	S	ASTM		0323			4 d.	PERCENT	لعا	VAPORATED	TED			RES	LOSS
0.5	۵.	M H	S	G/GAL	0908	0357	2	LB	186	5 1	0	20 3	0 5	0 7	06 0	56	EP	×	₩
	2	0.030	**	1.96	92.1	85.5	88.8	8.2	66	114 1	27 1	43 1	59 2	00 24	49 31	6 352	399	1.0	1.2
E	2	1	8	2.70	92.5	86.3	89.4	0.6	96	112 1	24 1	43 1	2	2	2 32	3	40	1.0	2
331 7 6	2	.034	-	2.76	92.4	86,3	89.4	80	94	1111	23 1	39.1	2	m	1 33		3 413		•
13	1.	.025	-	2.22	92.4	85.6	89.0	5.0	95	107 1	21 1	43 1	64 2	0	1 35	36	4 1	•	1.9
10	62.4	.029	-	2.63		85.7	88.9	80	95	112 1	23 1	40 1	58 2	2	51 33	37		•	1.4
11	2	.029	0	2.68		85.5	88.8	0.6	97	111		42 1	0	2	6 33	8 37	4.1	•	
ın	8	.034	-	2.14	92.4	85,3	88.9	8.1	66	5	27 1	150	4 2	7 2	33	7 37	4	1.0	1.5
50		.034		2.19		85.6	68.9	80	94	113 1	27 1	47 1	69 2	2	1 32		1 410		6.5
14	62.4	.034		2.56	2		89.5	8	94	112 1		. m		8	(m	4 37	2 418	100	40
11		.041	-	2,56			89.0	6.3	9 4	0		0	~	1 60	333	8 37	4		9 9
22	60.1	.054	~	2.13	93.4	84.5	89.0	8.5	95	114 1	27 1	9	69 2	2	9 32	7 35	9	•	1.6
AVERAGE	62.2	.034		2.41	92.4	85.7	89.1	8.8	95	112 1	24 1	43 1		05 25	6 33	3 366	8 411	0	1.6

TABLE 3. " MOTOR GASOLINE SURVEY, SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

DIST. 10 CENTRAL PLAINS -- CONTINUED NESTERN IOWA, NW MO., AND NORTHERN KANS.

		GR.	SULF	GUM		OCTANE	NE NEW	BER	RVP			a	STIL	DISTILLATION	NO	ASTE	080			
	SAM	ASTM	ASTM	ASTM		RESA	HOT.	¥+2	ASTM	TEMP	ERATU	TURE, F CCORRECTED	333	RREC	TED	10 76	MM 09	(DH		
ITEM	PLES	0287	01266	0381	0526	ASTR	ASTM	* * * * * * * * * * * * * * * * * * * *	0323			PEF	PERCENT	1	EVAPORATED	TED			RES	LOSS
		API	3	MG	6	0000	0357	2	LB	186	5 1	0 20	30	05 (10	06	6	EP	×	
340	19	64.5	0.026	94	2,87	98.9	92.0	95.5	8,2	96	112 1	25 14	44 16	63 20	7 24	6 32	368	413	1.0	1.4
341	60	4			2.72	99.2		95.9	9.1	06	•	119 13	38 15	59 20	4 24	4 326	6 305	408	1.0	1.5
342	7	64.2	.022		2.84	99.2	95.8	0.96	9.6	92	108 1	26 14	47 17	72 21	4 24	6 33	5 308	41	1.0	1.6
343	13	2	.013		2.46	98,5	92,3	95.4	9.6	9.6	109 1	27 15	55 18	80 21	8 25	5 32	300	390	6.	1.9
344	10	4	.029		2.71	99.1	95.6	95.9	8.7	93	112 1	7 1	48 17	71 21	2 24	9 329	306	411	6.	1.7
345	11	62.3	.018		2.92	98.8	91.7	95,3	6.9	63	112 1	30 15	3 1	76 21	3 24	7 310	348	394	1.0	1.5
346	₁ C	62.7	.019		2.86	98.4	91.4	6.46	8.4	26	114 1	28 15	51 17	74 21	8 26	33	5 369	413	1.1	1.6
347	5	65.5	.021	-	2.56	98.9	93,3	96.1	9.6	96	114 1	31 15	55 17	77 21	1 24	3 32	372	405	6.	1.3
348	14	63.3	.022	-	2.91	98.8	92.2	95.5	8,3	93	112 1	5 1	47 16	69 21	4 25	5 33(0 36A	604	1.0	1.6
349	***	62.6	.021	2	2.66	0.66	92.3	95.7	9.1	66	109 1	21 14	44 16	66 21	2 25	5 33	361	404		1.7
350	22	61.9	.024	-	2.82	7.66	92,1	95.9	8,5	95	114 1	9 1	52 17	75 21	6 24	9 31	348	388	1.0	1.8
AVERAGE		63.5	.022	-	2.76	0 66	92,3	95.7	8.7	9.0	1111	26 14	49 17	71 21	3 25	0 320	6 363	404	1.0	1.6

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

	TEX.
	NORTHERN
	AND
	ARK.
	WESTERN
	MO . »
	E S
SOUTH PLAINS	SOUTHERN KANS.
9-4 9-4	

	L055	
	e m m ≈ o	0 4 44 44 4 44 444
	HG)	44444444444444444444444444444444444444
0.86	N CO	
3	06	
A S	TO T	00000000000000000000000000000000000000
TON	ECTED VAPOR 50 7	
NOTTALLITY	NT E	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
TSTO	4 4 2 0	
	A G O	
206 206	ERATU 5 1	40-00000000000000000000000000000000000
5	B P P	~ 4 4 0 N U W W N N W → → 4 4 U M 4 U A → M
r 0L	BOH	4 - 0 0 0 - 0 - 0 0 0 0 - 0 0 0 0 - 0
1 02	D3 P	N N Ø N A Ø N W Ø A Ø Ø Ø P Ø A Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø Ø
	C 1	
Z Z	01. STH 357	
TANE	A Z O	
20		00000000000000000000000000000000000000
•	S S T	00000000000000000000000000000000000000
-	A COS	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
N A	AST D38	11 11
e L	NO E	
Sur	AST	000000000000000000000000000000000000000
Q.	ASTH D287	00 U U U U U U U U U U U U U U U U U U
	PLES	
	TEM	

TARLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 11 SOUTH PLAINS--CONTINUED SESTERN ARK., AND NORTHERN TEX.

		2	UL U	2	E	OCTA	NENCK	BER	2				DISTILLATION	LLAI	ION	ASTM	M U8	٥		
	I	ASTM	ASTH	ASTM	ASTM	ESP	MOT	*	ASTM	TEMP	ERAT	URES	F	CORRE	CTED	-	092	I	60	
TEN	LES	28	12	38	52	ASTM	ASTM		32			Р	ERCE	NT EV	VAPOR	RATED				S L05
		0_	-	S N	5/	06	35	8	L8	H B P	S.	10	20	30	50 7	6 02	0	ς 2	₽	34
372		5		8	S.		8	. 9	1		8	,		8	8	8			•	•
373		-	-		-	6	2	•				122		0	19	29	35	0 3	0	
374	12	58.5	900.	-	3.02	99.1	91.7	95.4	9,3	94	108	126	150	175 2	224 2	267 3	04	4	05 1.	2 2.0
375		9	4	-	9	6	9	. 9	•			126		đ		24		4	4	-
376		0	00	-	5	6	4	7	•			CV		0	14	58	23	8 4	04 1.	1.
377		0	2	0	6.	6	2	ទ		84		S		2	22	9	131 3	6 4	2	2
378		5.				6	9	9		•						1			•	1
379	_	-			6.	6	3,	9	•	96		130		~	11	258 3	3	\sim		8 1.
380		2	.018	**	9	6	2	6.56	6.9	96	112	128	151	174	219	10	134 3	72 4	09 1.	0 1.6
381		80		8	9	6	5	-		•								,	•	8
382		6.		•	.3	6	2	9											-	k
383		5		8	.2	6	2	9		91	104			~	16	63	44			-
384	S	6	0	~	~	6	2	•	•			α		2	22	9		4	97 1.	-
385			.014	-		6	3.		0.6	6	108	126	152	28	222	262 3	58	04 4		9 1.
386		-1	C	-	6	80	2	5				3		8	13	4		0	70	-
387	~				-	0	2	•	•											
388		9	9		~	0	4	7.			ightharpoonup	m	6	81	12	0 4	56	0.4	0	0 1.
389		8	.032	2	.3	6	2		9.2	91	105	118	137	158	219	<u>س</u>	346 3	07 4	12 1.	0
390		3	+-		-	6	3	9			-	O	4	99	21	69	42	0/		-
391		•	-	~	0	6					0	\sim	4	73	18	61	17	45		1.
392					0.	6	93.3	• 9			0	~	2	62	14	39	27	11	0	0 2.
FDACE		61.0	0+0	-	2 05	00 5	- 20	5 YO	0	00	000	124	4 4 8	179	217	0	2 30 3	4 5 6	1 00	1 7

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 12 SOUTH TEXAS

			L055	24	6.3		ī.	6.3	50	0.	89	2	•2	٠. ت		0	.7				.7	.8	6.3	
			S		9 1	-	5			0 2		0	-	0	-	9	9 1	8 1	9 1	9 1	9	0	9 1	
			R	34	0	•	•	•	•	-	•	+	•	-	•	•	•	•	•	•	•	-	_	
		HG		EP	407		368		417	410	0	0	•	CV	420	-	0			0		406	407	
	080	HHO		65	0	4	24	348	370	•	326	9	5	386	377	375	0	5	364	4	9	365	357	
		0 76	ED	06	316		299	2	335	345	~	3	N				(17)	318	325	0		333	325	
	~	10	ORATI	02	- 47	\sim	241	S	251		214	*	(L)	S	260	9	9	4	1	O	4		247	
	ISTILLATIONA	RRECTE	EVAPI	20	200	193	199	204	200	0	184	193	0	0	207	0	1975	9	198	8	0	188	198	
	ורו	COR	-	30	•	S		9			S	N)	10	9	62	9	9	9	M	10	10	5	59	
	ST	F (0	RCEN	0		-		45 1			38 1	0	0	17 1	43 1	9	9	14 1	10 1	60	11 1	0	42 1	
	0		PE	5	-	-	-		-		444	-	-	-	-	•	-	-	-	quel	-	-	4 1/	
INE		TUR		20		O		2		8	C	2	N	120	8	2	2	12	12(2	12	12	12	
1708		ERA		ın		444	114		111		-	44	0	-	113	-	0	-	107			114	112	
E GA		TEMP		186				9.4															94	
RIC	0	HE	N	8,	•			6.7															8.8	
R = P	æ	4	0	_		_	_	_	_	_				_	_		_					_		
GULA	ER	X+X		CV.	-	•	0	90.7	-	0	0	0	0	6	0	0	90.1	•	89.6	0	0	91.1	90.0	
RE	NONB	1.	Ξ	25		9.	9.		9.	0	~						4			0		0	۳.	
	LJ K	0	AS	3	10		-	•		~	1	~	~	40	P	~	9	1	9	p.	 	~	87	
	CTA	S	I	0				EC.							0.									ı
	0		AS					94															69	
	ADA	H	56	GAL			9.1	47	16	90	99	64	24	9 /	24	88	87	19	90				04	
	La.	AS	NO.		•			8																ı
	GUM,	ASTE	0381	O				•	•		8		•	-			-				-	e		
		_	9		7	9		9	-	~	-		60			0				9	-	-	0	
	SULF	ST	D126	H	0.02	.02			.03					0									.03	
		STE	287		1.4	6.1		1.9	1.3		4,3		5.9				0:	2.1	6.1	5.9	1.5	2.7	2.2	
	G	<u> </u>	S	⋖	•	9	9	9	9	9	•	9	9	9	9	9	9	9	9	3	9	9	9	8
		SAM	F		-			-	-								-				-			•
			ITEM		393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	AVERAGE	CAMBIEC

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 12 SOUTH TEXAS -- CONTINUED

		œ	SULF	×	Lei	DCTA	NE NUM	BER	7			0	STIL	DISTILLATION	•	ASTM	080			
	×	S	ASTH	ASTH	ASTM	ESP	2	I + CK	ASTM	TEMP	ERATURE	RE, F		(CORRECTED		10 76	60 MM	HG)		
TEM	PLES	28	01266	38	52	S	S		32			PEF	RCENT	FVA	PORA	TED			RES	L055
		API	N H	U	G/GAL	0908	0357	2	1.8	186	5 1	0 2	0 30	0 50	7.0	06	95	EP	æ	×
411	6	0	~		~	0	~				122 1	80	3 1	50	2 25		4 340	m	0.8	1.2
412	12	6	.01		-	6				40	114 1	9	3 1	C	8 25	32	35	40	٥.	1,3
-		6	.024		•	0	3	96.5			129 1	9	3D	9	4 26	C	(L)	38	-:	1,2
414	2	63.6		•		99.1	91.0	95,1	8.7	96	110 1		32 14	44 17	6 23	-	3 340	പ	1.2	1.8
9		2	-		6	00	CV				112 1	ع د	2 1	0 2	8 24	59	6	367	•	•
-	13		01	2	0	0	CV			9.4	1111	5 1	6 1	67 21	92 9		4 347		•	1.4
. ***			00	-	0	66	3	9	8.7		104 1	N.	•	- 21	~	4	ا ا	416	7	2.0
•		0	0		-	6	-				125 1	4 1	40	0	2 25	31	ىم	40	6.	1.1
•	0	0	02	8	0	6	3.	7.96		91	107 1	-	0	N	0 25	31	9	0 4	-	1.4
. 0	9	80	0	•	2	0	2	9			112 1	7	9 1	1 2	8 25	31	رب	40	•	1.7
421	4	60	000	2		66		. 9	8.4	46	115 1	9		32 23	4 28	1 33	5 360			1,3
· (~	647	6	0		1	00				100	119 1	8 1	~	8 2	0 28	35	60	41	•	1.9
. 6		-	0		-	00	8	9		94	-	8	10	3	5 27	32	e.	40	-	1.2
· 6	13	0	01	~		0	2	9	90	9.2	\rightarrow	9	2	73 21	0 24	9 306	e.	39	0.	1.5
· C		0	02		~	00	2				120 1	2	7	2 2	1 26	33	9	40	•	1.1
C	6	6	N		•	6	(T)		8.2		1111	1 9	9	3 2	5 27	3	സ	42	-	1.0
୍ଦ	10		00		.2	9			E 6	92	106 1	0	0	0	3 27	33	4 356	40	•	1.4
~		3	0	2	0	-			in 6		115 1	3	0	0	4 26	m	1 336	37	•	1.8
AVFRAGE			.017	0	3.14	100.0	92.5	96.3	8.8	9.5	114 1	28 1	50 17	72 21	7 26	1 32	4 350	399	0.	1.4

TABLE 3. - MOTOR GASOLINE SURVEY, SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

	CALIF.
	AND E.
	NEV.
	ARIZOD
	UTAH
	COLO.
	MEX.
	EX. N.
	-
	. AND TEX. PANHANDLES, W. TEX., N. MEX., COLO., UTAH, ARIZ., NEV., AND E. CALIF.
	TEX.
TES	A. AND
STATE	OKLA.
3 SOUTH MT.	SW KANS., O
13 5	S
DIST. 1	

			L055	be	1.4	1.4	1.0			1.1	1.9		8	1.1	1.1	1.0	6.	1,3		1.2		1.2	1.7	1.4	1 . 4	1,2
			RES	×	1.0	9.	6.		6.	٥.	9.	æ		6.	6.	1.0		1.2	٥.	٥.		1.0	٥.	•	1,0	6
		HG)		۵.	10	0			-	•	0.4	17			•	14	00	0.4	900	22		0	S	60	17	112
	٥	I		5 E	7 3 4	67 3	78 4		_		4 99	74 4		4 6 /	78 4	377 4	47 4	70 4	81 4	84 4		74 4	80 4	80 4	84 4	75 4
	0.8	09		0	£.	4	9	_	E I	8	0	7		c.	S	44 3	9	'n	9	0		2 3	7 3	3	6	11 3
	ASTM	7 01	TED	06	6 34	0 34	6 33	8	0	1 3	9	60	*	0	S	M	m 4	2	1	7		8	9	0	6	1 341
	ž	TED	ORA	7.0	2	6 28	N	•	2	4 27	1 26		•	CV	~	9 56	2	8			•	N	C	1 26	~	0 26
	ATIC	REC 1		20	944	236	0		20	21	211	0		0	0	200	0	0	0	-	•	-	-	211	0	21
	DISTILLATION	CCORR	-	30		194			167		166	165				168	9		9				~	171	165	169
	0151		ERC	20		168	148				145		8	151	146	150	•	141		150				152		149
M M		URE	۵	10		139	129		131		125		ı			133				131		133	129	130	125	130
ASOLINE		RAT		S		20	16		119		13			124	117	121	112	113	117	117		119	-	116	12	117
G		EMPE		0.0		95				0	93			0		02				Ö		0.1	~	97		98
RICE		H		I 8		۳.	7			.0	٠.			.3		.3						.7 1		w-4 0	2.	0.
R - 0	>	AS	3		40	•••	0	_		_	~	•	_	_	•	_	0,	**	~	~	_	_	•	•0	_	8
REGULAR-PRIC	22	X+ C	:	CV.				87.7	6					80		0			6		-	8.8	6	18.2		88.6
141	30										-			-	_			-	40	•	8	8	40	a,		
	I D	-	Ξ	2.5	9	0		9	6	•	4	9	-	an.	~	~	4	الما	9	الما	9	0	N.	8	7.	0
	NE NU	01	ASTM	35	•			3	6.	5.6	3.4	5.6	7.1	in.	5.7	~	4.4	٥.	5.6	е.	2.8	6.4	20.50	85.1 8	4.7	85.0
	CTANE NU	S. MOT	TA AT	08 035	.1 85.	.3 83.	.2 85.	.7 63.	.5 85.9	.1 65.6	.2 63.4	9 85.6	.0 67.1	.2 85.5	68.7	.1 85.7	.9 84.4	64.3	.7 85.6	.2 65.3	.6 62.8	2 84.9	0 85.5	.2 85.1	.6 84.7	5
	OCTANE NU	ES. MOT	TA AT	0908 035	3,1 85,	1.3 83,	2.2 85.	1.7 63.	2,5 85,9	3.1 65.6	2.2 63.4	1.9 85.6	1.0 67.1	2.2 85.5	1.8 85.7	.1 85.7	1.9 84.4	64.3	2.7 85.6	.2 65.3	2.6 62.8	2.7 84.9	4.0 85.5	.2 85.1	1.6 84.7	.2 85.
	EAD. OCTANE NU	STM RES, MOT	526 ASTM AST	/GAL D908 D35	3,1 85,	0 91.3 83.	5 92.2 65.	9 91.7 63.	2,5 85,9	5 93.1 65.6	4 92.2 63.4	.83 91.9 85.6	.42 91.0 67.1	.55 92.2 85.5	.72 91.8 65.7	.42 93.1 85.7	0 91.9 84.4	0.8 84.3	7 92.7 85.6	8 93.2 85.3	5 92.6 62.8	92.7 84.9	0 94.0 85.5	91.2 85.1	.22 91.6 84.7	.33 92.2 85.
	LEAD, OCTANE NU	A ASTM RES. MOT	1 D526 ASTM AST	G/GAL D908 D35	.30 93.1 85.	.30 91.3 83.	5 92.2 65.	9 91.7 63.	1 92.5 85.9	65 93.1 65.6	4 92.2 63.4	.83 91.9 85.6	.42 91.0 67.1	5 92.2 85.5	.72 91.8 65.7	.42 93.1 85.7	0 91.9 84.4	14 90.8 84.3	47 92.7 85.6	08 93.2 85.3	15 92.6 82.8	41 92.7 84.9	00 94.0 85.5	98 91.2 85.1	.22 91.6 84.7	33 92.2 85.
	UM. LEAD. OCTANE NU	ASTM RES. MOT	381 D526 ASTM AST	G/GAL D908 D35	2,30 93,1 85.	3,30 91,3 83,	.35 92.2 85.	3.09 91.7 63.	2.51 92.5 85.9	2.65 93.1 65.6	1.64 92.2 63.4	2.83 91.9 85.6	2.42 91.0 67.1	2.55 92.2 85.5	2.72 91.8 85.7	2.42 93.1 85.7	1.80 91.9 84.4	1.14 90.8 84.3	2.47 92.7 85.6	2.08 93.2 85.3	2.15 92.6 82.8	2.41 92.7 84.9	2.00 94.0 85.5	1.98 91.2 85.1	2.22 91.6 84.7	.33 92.2 85.
	GUM, LEAD, OCTANE NU	ASTM ASTM RES. MOT	6 D381 D526 ASTM AST	MG G/GAL D908 D35	3 1 2,30 93,1 85.	3,30 91,3 83,	1 2.35 92.2 85.	- 3.09 91.7 63.	4 1 2.51 92.5 85.9	9 4 2.65 93.1 65.6	- 1.64 92.2 83.4	- 2.83 91.9 85.6	6 - 2.42 91.0 67.1	9 - 2.55 92.2 85.5	8 - 2.72 91.8 85.7	2 3 2.42 93.1 85.7	4 - 1.80 91.9 84.4	- 1.14 90.8 84.3	4 1 2.47 92.7 85.6	3 1 2.08 93.2 85.3	0 = 2.15 92.6 82.8	2 1 2.41 92.7 84.9	8 3 2.00 94.0 85.5	6 1 1.98 91.2 85.1	6 - 2.22 91.6 84.7	2 2 2.33 92.2 85.
	ULF. GUM, LEAD, OCTANE NU	STE ASTM RES. MOT	1266 D381 D526 ASTM AST	T X MG G/GAL D908 D35	73 1 2.30 93.1 85.	50 - 3,30 91,3 83,	029 1 2.35 92.2 65.	3.09 91.7 63.	1 2.51 92.5 85.9	59 4 2.65 93.1 65.6	- 1.64 92,2 83.4	- 2.83 91.9 85.6	06 - 2.42 91.0 67.1	59 - 2.55 92.2 85.5	28 - 2.72 91.8 85.7	3 2.42 93.1 85.7	04 = 1.80 91.9 84.4	1.14 90.8 84.3	54 1 2.47 92.7 85.6	043 1 2.08 93.2 85.3	070 = 2.15 92.6 82.8	52 1 2.41 92.7 84.9	056 3 2.00 94.0 85.5	1 1.98 91.2 85.1	46 - 2.22 91.6 84.7	2 2.33 92.2 85.
	R. SULF. GUM. LEAD. OCTANE NU	STE ASTE ASTE ASTE RES. MOT	287 D1266 D381 D526 ASTM AST	PI WT X MG G/GAL 0908 035	9.4 0.073 1 2.30 93.1 85.	6.2 .050 - 3.30 91.3 83.	1.7 .029 1 2.35 92.2 65.	5.9 - 3.09 91.7 63.	0.0 .064 1 2.51 92.5 85.9	9.1 .059 4 2.65 93.1 65.6	0.7 - 1.64 92.2 83.4	3.6 - 2.83 91.9 85.6	2.8 .006 - 2.42 91.0 87.1	2.2 .059 = 2.55 92.2 85.5	3.4 .028 - 2.72 91.8 85.7	9.2 .072 3 2.42 93.1 85.7	0.4 .104 - 1.80 91.9 84.4	0.4 - 1.14 90.8 84.3	9.7 .054 1 2.47 92.7 85.6	8.1 .043 1 2.08 93.2 85.3	7.4 .070 - 2.15 92.6 82.8	8.8 .052 1 2.41 92.7 84.9	8.8 .056 3 2.00 94.0 85.5	0.3 .026 1 1.98 91.2 85.1	1.3 .046 - 2.22 91.6 84.7	0.4 .052 2 2.33 92.2 85.
	R. SULF. GUM. LEAD. OCTANE NU	- ASTE ASTE ASTE ASTE RES. MOT	S D287 D1266 D381 D526 ASTM AST	PI WT X MG G/GAL 0908 035	7 59.4 0.073 1 2.30 93.1 85.	3 56.2 .050 - 3.30 91.3 83.	9 61.7 .029 1 2.35 92.2 85.	2 65.9 3.09 91.7 63.	4 60.0 .064 1 2.51 92.5 85.9	6 59.1 .059 4 2.65 93.1 65.6	3 60.7 - 1.64 92.2 83.4	63.6 - 2.83 91.9 85.6	62.8 .006 - 2.42 91.0 67.1	8 62.2 .059 - 2.55 92.2 85.5	5 63.4 .028 - 2.72 91.8 85.7	59.2 .072 3 2.42 93.1 85.7	3 60.4 .104 - 1.80 91.9 84.4	3 60.4 - 1.14 90.8 84.3	1 59.7 .054 1 2.47 92.7 85.6	5 58.1 .043 1 2.08 93.2 85.3	3 57.4 .070 - 2.15 92.6 82.8	0 56.8 .052 1 2.41 92.7 84.9	8 58.8 .056 3 2.00 94.0 85.5	3 60.3 .026 1 1.98 91.2 85.1	61.3 .046 - 2.22 91.6 84.7	.4 .052 2 2.33 92.2 85.
	R. SULF. GUM. LEAD. OCTANE NU	K. ASTM ASTM ASTM ASTM RES. MOT	LES D287 D1266 D381 D526 ASTM AST	PI WT X MG G/GAL 0908 035	59.4 0.073 1 2.30 93.1 85.	3 56.2 .050 - 3.30 91.3 83.	61.7 .029 1 2.35 92.2 85.	2 65.9 3.09 91.7 63.	60.0 .064 1 2.51 92.5 85.9	6 59.1 .059 4 2.65 93.1 65.6	3 60.7 - 1.64 92.2 83.4	63.6 - 2.83 91.9 85.6	62.8 .006 - 2.42 91.0 67.1	8 62.2 .059 - 2.55 92.2 85.5	5 63.4 .028 - 2.72 91.8 85.7	4 59.2 .072 3 2.42 93.1 85.7	3 60.4 .104 - 1.80 91.9 84.4	3 60.4 - 1.14 90.8 84.3	59.7 .054 1 2.47 92.7 85.6	5 58.1 .043 1 2.08 93.2 85.3	3 57.4 .070 - 2.15 92.6 82.8	0 56.8 .052 1 2.41 92.7 84.9	58.8 .056 3 2.00 94.0 85.5	3 60.3 .026 1 1.98 91.2 85.1	61.3 .046 - 2.22 91.6 84.7	0.4 .052 2 2.33 92.2 85.
	R. SULF. GUM. LEAD. OCTANE NU	ARE ASTE ASTE ASTE ASTE TES. TOT	EM PLES 0287 01266 0381 0526 ASTM AST	PI WT X MG G/GAL 0908 035	9 27 59.4 0.073 1 2.30 93.1 85.	0 3 56.2 .050 - 3.30 91.3 83.	31 19 61.7 .029 1 2.35 92.2 85.	32 2 65.9 3.09 91.7 63.	33 34 60.0 .064 1 2.51 92.5 85.9	34 16 59.1 .059 4 2.65 93.1 65.6	35 3 60.7 " 1.64 92.2 83.4	36 3 63.6 2.83 91.9 85.6	37 3 62.8 .006 - 2.42 91.0 67.1	38 28 62.2 .059 - 2.55 92.2 85.5	39 15 63.4 .028 - 2.72 91.8 85.7	40 24 59.2 .072 3 2.42 93.1 85.7	41 3 60.4 .104 - 1.80 91.9 84.4	42 3 60.4 - 1.14 90.8 84.3	43 31 59.7 .054 1 2.47 92.7 85.6	44 35 58.1 ,043 1 2,08 93,2 85,3	45 3 57.4 .070 - 2.15 92.6 82.8	46 50 56.8 .052 1 2.41 92.7 84.9	47 18 58.8 .056 3 2.00 94.0 85.5	48 13 60.3 .026 1 1.98 91.2 85.1	49 9 61.3 .046 - 2.22 91.6 84.7	AGE 60.4 .052 2 2.33 92.2 85.
	R. SULF. GUM. LEAD. OCTANE NU	ARE ASTE ASTE ASTE ASTE TES. TOT	M PLES 0287 01266 0381 0526 ASTM AST	PI WT X MG G/GAL 0908 035	9 27 59.4 0.073 1 2.30 93.1 85.	0 3 56.2 .050 - 3.30 91.3 83.	31 19 61.7 .029 1 2.35 92.2 85.	32 2 65.9 3.09 91.7 63.	33 34 60.0 .064 1 2.51 92.5 85.9	34 16 59.1 .059 4 2.65 93.1 65.6	35 3 60.7 " 1.64 92.2 83.4	36 3 63.6 2.83 91.9 85.6	37 3 62.8 .006 - 2.42 91.0 67.1	38 28 62.2 .059 - 2.55 92.2 85.5	39 15 63.4 .028 - 2.72 91.8 85.7	0 24 59.2 .072 3 2.42 93.1 85.7	41 3 60.4 .104 - 1.80 91.9 84.4	42 3 60.4 - 1.14 90.8 84.3	43 31 59.7 .054 1 2.47 92.7 85.6	44 35 58.1 ,043 1 2,08 93,2 85,3	45 3 57.4 .070 - 2.15 92.6 82.8	46 50 56.8 .052 1 2.41 92.7 84.9	47 18 58.8 .056 3 2.00 94.0 85.5	48 13 60.3 .026 1 1.98 91.2 85.1	449 9 61.3 .046 - 2.22 91.6 84.7	0.4 .052 2 2.33 92.2 85.

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 13 SOUTH MT. STATES--CONTINUED
SM KANS., OKLA. AND TEX. PANHANDLES, W. TEX., N. MEX., COLO., UTAH, ARIZ., NEV., AND E. CALIF.

## PLES D287 D1266			~	SULF,	3	EA	OCTA	H	BER	V		1		IST	LLAT	21	ST	80	1			
FM PLES D267 D1266 D361 D526 ASTM ASTM === D323 B.7 PRINTERINT EVAPORATED FOR MINISTRAL BROWN FOR MINISTRA		A	AST	15	ST	-	S	01		ST	TEMP	E	3	<u>ا</u>	ORRE	la1	- [09	I	_		
For any other part of the proof		la -	D 2 A	126	100	. 0	15	5		32				RCE	TEV	APOR	TE		_	8	S	0.88
50 27 59.4 0.026 1 2.67 99.2 91.4 95.3 8.7 94 111 127 152 176 223 264 331 305 400 551.2 000		4	APE	×	S	1 (2	9	35	21		8		0	0	0	7	٥	0	w			
51 19 62.3 .031	M		0	6	-			_	ur.	40	46	1	27	52	9 2	23 2	4	3	4		9	5
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52 19 62.3 .031	n		51.	0	•	~	9	•	•	K.	0 6						, ,		7	~	•	C
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33 60.6 0.040 2 2.85 99.6 92.9 96.4 8.3 97.116 129 149 177 220 256 325 361 36.3	LC		52.		8	2	00	:	•	_	8	8						-			•	
16 63.4 031 3 2.62 99.9 96.4 8.3 97 116 129 149 170 214 249 310 340 386 417 32 156 179 227 277 346 378 418 356 179 227 277 346 378 418 356 179 227 277 346 378 418 356 179 227 277 346 378 418 356 179 227 277 346 378 418 356 179 227 277 346 378 418 356 179 227 277 346 378 418 359 99.2 97.2 7.7 97 113 125 146 166 210 237 295 360 418 389 360 418 32 355 360 418 32 355 360 418 32 355 360 418 32 355 360 418 32 355 360 418 32 355 360 418 32 355 360 418 32 355 360 418 32 355 360 418 355 360 418 355 360 360 360 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 418 355 360 360 360 360 418 355 360 360 360 360 360 360 360 360 360 360	l M		60	0.0	2	40	66	2	9	~	66	•	32	5.4	11	20 2	56 3	S)	4	ın.	6.	0
56. 3.01 97.2 98.2 92.7 7.9 95.117 132.156 179.227 378.418 378.418 378.418 378.418 377.246 377.27 377.113 125.146 166.210 237.295 300.448 99.2 99.4 95.6 7.8 103.119 132.152 173.216 253.323 300.448 300.4 300.2 95.6 7.8 103.119 132.152 173.216 253.323 300.441 300.4 300.4 300.4 300.7 300.4 300.7 300.2 300.1 300.2	15		63	0	67	40	6	0	9	æ	16	-	50	49	20	14 2	49 3	10 3	0	دع	-	2
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55.9 .031 - 2.75 100.1 91.2 95.7 8.2 98 121 134 157 181 228 278 340 364 411 63 31 62.2 .035 0 2.76 99.1 92.5 95.8 8.0 95 115 130 153 175 218 258 331 366 40 65 35 59.6 .028 2 2.26 99.2 91.7 95.5 7.5 99 118 135 159 182 221 260 325 357 40 66 3 55.9 .000 - 3.88 100.0 92.5 96.3 7.6 99 118 135 159 182 221 260 325 357 40 60 60.9 .019 2 2.26 99.1 91.2 95.2 7.6 99 118 133 155 177 220 259 321 353 40 60 60 13 60.5 .025 1 1.98 97.2 89.6 93.4 7.9 96 118 135 159 182 231 274 333 364 40 60 60 60 60 60 60 60 60 60 60 60 60 60) V		, E	6	~	. 0	00		9	7	100	CV	36	59	83	24 2	63	23 3	55 4	-	-	
64 31 59.7 2.75 96.9 89.0 93.0 8.1 91 114 125 146 169 218 267 354 386 40 65 35 359.7 2.76 99.1 92.5 95.8 80.0 95 115 130 153 175 218 258 331 366 40 65 35 59.6 2.26 99.2 91.7 95.5 7.5 99 118 135 159 182 221 260 325 357 40 65 18 59.0 2.2 2.60 98.0 91.7 95.2 7.6 99 118 133 155 177 220 259 321 353 40 67 20 031 22 2.86 99.1 91.2 95.2 8.6 95 111 127 150 174 219 264 334 367 41 69 13 60.5 3.00 98.7 92.3 95.5 7.9 96 118 135 159 185 231 274 333 364 40 96 12 145 177 221 261 328 363 40 97 116 131 154 177 221 261 328 363 40	DY		D M	ה ה	· •	•			, ur	•	98	O	34	21	8.1	28 2	78	40 3	64 4	N.	8 1	2
54 31 56.2 . 035 0 2.76 99.1 92.5 95.8 8.0 95 115 130 153 175 218 258 331 366 40 65 35 50 0 2.76 99.1 92.5 7.5 99 118 135 159 182 221 260 325 357 40 65 35 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	D 4	י ר	0 0	י כו		•	9 4		1 17	•	16	-	25	46	69	18 2	29	54 3	86 4	40	8	2
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66 3 55.5 .000 - 3.86 100.0 92.5 96.3	D 4			0 0	۰ ۵		. 0		, in	~	66	-	3	0	82	21 2	09	25 3	7 4	03		.2
67 50 60.9 019 2 2.60 98.6 91.7 95.2 7.6 99 118 133 155 177 220 259 321 353 40 68 18 59.0 031 2 2.86 99.1 91.2 95.2 8.6 95 111 127 150 174 219 264 334 367 41 69 13 60.5 025 1 1.96 97.2 89.6 93.4 7.9 96 118 135 159 183 231 274 333 364 40 69 13 60.5 025 1 1.96 97.2 89.6 93.4 7.9 92 108 123 145 170 219 264 333 369 41 77 028 2 2.82 99.1 91.8 95.5 7.9 92 108 123 145 170 219 264 333 369 41) 4		, R	0			00	2	9			1					1					
68 18 59.0 031 2 2.86 99.1 91.2 95.2 8.6 95 111 127 150 174 219 264 334 367 41 69 13 60.5 0.25 1 1.96 97.2 89.6 93.4 7.9 96 118 135 159 183 231 274 333 364 40 70 9 62.7 0.45 - 3.00 98.7 92.3 95.5 7.9 92 108 123 145 170 219 264 333 369 41 AGE 59.7 0.28 2 2.82 99.1 91.8 95.5 8.0 97 116 131 154 177 221 261 328 363 40) v		10	2 0	0	9	9 6		8	7	66	-	3	55	11	20	50	21	53			
69 13 60.5 .025 1 1.96 97.2 89.6 93.4 7.9 96 118 135 159 183 231 274 333 364 40 70 9 62.7 .045 - 3.00 98.7 92.3 95.5 7.9 92 108 123 145 170 219 264 333 359 41 AGE 59.7 .028 2 2.62 99.1 91.8 95.5 8.0 97 116 131 154 177 221 261 328 363 40) ·C		300	0	0		0	-	S			-	\sim	20	74	19	6.4	34	29	5	. 6	. 7
70 9 62.7 .045 - 3.00 98.7 92.3 95.5 7.9 92 108 123 145 170 219 264 333 369 41 AGE 59.7 .028 2 2.62 99.1 91.8 95.5 8.0 97 116 131 154 177 221 261 328 363 40	1		60	0	-	0	7	6	6	7.		-	3	59	83	31	74	33	40			
AGE 59.7 .028 2 2.62 99.1 91.8 95.5 8.0 97 116 131 154 177 221 261 328 363 40	~		62	0 4	• •	0	80	2	5	7.		0	~	45	20	19	64	33 3	69			•
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TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

2		
		OREG.
		WYD. & MONT. & IDAHD. EASTERN WASH. & AND EASTERN DREG.
		AND
		MASH
		EASTERN
	ATES	IDAHO.
	DIST. 14 NORTH MT. STATES	MONT.
	NORTH	WYD.
	4	
	DIST.	

REGULAR-PRICE GASOLINE

		L055	24		3.0	1.4	1.8		1.4	1.5		1.7	1,3	1.0	1,3	1.1	1.6	1.4	
	L	KES	×		7 .	101	1.0	6.	6.	1.2			1.2			1.0	1.0	1.0	
	HG.)		G.	(414	393	424		419		398	402	397	393		399	907	
080	MM		6	4	0	309	367	371		383	373		382	361	375	368	369	372	
ASTM	760	E.D	06		7		338	338	337	348	345	329	349	3	4	335	~	340	
	-	OKAT	20	3	002	267	267	261	260	265	271	257	277	255	270	258	265	264	
ATIO	ECT	ᇜ	20			217	215	213	210	213	218	206	CV	209	218	209	216	213	
DISTILLATION	COR	N	30	1	0	172	169		167	170		166	181	165	~	165	171	170	
018	1-	PERC	20			152	147	149	147	150	149	146	159	144		145		149	
	TURE		10				125		128		127	127	136	122	129	125	126	128	
	PERA		'n	١ ،	-	117		115		116			120				111	114	
	TEM		186			98	95	94		96			101					96	
RVP	ASTM	32	FB			8,5	9.1	0.6		8.8								8.8	
BER		0	7		٠ ۲	89,3	8	6	6	88.9	6	0	6	0	80	6	8	89.3	
ANE NUM	MOT	2	35	١,	0	,	4	5	5	85.2		5	. 9	9	4	5	4	85.5	
OCTAN	RESP	SI	90	1	۵,	2	2	60	C	95.6	4	S	رما •	۵,	2	m	2	93.1	
14.5	ASTH	N	-	•	D	2.55	9.			2.54	6.			0	5	9	5	2.52	
UMA	ASTA	301		•	-	•	m		•	m	~	m			-	~	~		
SULF,	STE	01200	*	à	0	260°	.089	.045	.048	.049	.084	.042	.037	.030	960.	.064	.075	.063	
OC.		V				61.0	9.09	0	80.8	61.2	0	0	60.09	61.4		80.8	9.09	80.8	
	X L	_		4	*	14	12	9	9	17	4	~	9	-	15	~	12		111
	2	7 - 1		* 4 4	1 / 6	472	473	474	475	476	477	478	479	480	80	482	483	AVERAGE	SAMPLES

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 14 NORTH MT. STATES -- CONTINUED WASH. , AND EASTERN OREG. WYO. , MONT. , IDAHO, EASTERN WASH. , AND EASTERN OREG.

		GR.,	SULF	GUM	LEADA	DCTANE	NE NUMBER	HER	RVP			٥	DISTILLATION	LLAT	ION	ASTE	1 080	_		
	SAH	ST	ASTM	ASTM	<	لعاز		X+X	ASTH	TEMP	ERATURE,	IRE,	D) 4	CORRECTED	CTED	2	760 #	MM HG	2	
ITEM	PLES	0287	01266	0381	0	-	ASTE		0323			PE	PERCENT	1	EVAPORATE	ATED		_	RES	S
		API	j	O I	9/9	0000	0357	2	L8	IBP	5 1	0	20 3	0	20 2	20 90	;6 0	5 EP	34	
464	4	63.0	0.016	9*4	0	0	•	9.96	9,2	92	112 1	126 1			202		1 3		1 .	1 1
485	4		.017		2.82	98.	91.4	6.46	6.7	26	116 1	134 1	57 1	81 2	21 2	7 3	43 36	84 40	1 1.	
486	12	60.7	.040	~		99.4	1000	94.6	0.6	92	110 1	128 1	55 1	82 2	23 2	9	4 3	55 38		9 1.6
487	9		.022	•	2,40	99.5	92,1	95.8	9,3	93	2	128 1	53 1	11	14 2	47 3	21 36	52 41	9	9 1
488	•	62.7	.020	8	2.66	99.3	95.6	0.96	9.5	91	115 1	129 1	54 1	79 2	17 2	m	27 36	5 40	1 5	0 1.
489	17	61.1	.019	۳	3,01		91.5		0.6	96	117 1	132 1	57 1		25 2	60 3	39 37	4 8		
490	4	61.8	.043			101.0		0.96	8,2	9 8	116 1	134 1	62 1	91 2	242	51 3	15 34	66 38	1 .	0
491	7	65.9	.011	_	•	40	0	95.7		92	113 1	127 1			17 2	53 3	5 3	4 3		0
492	~		.019	-	2,35						117 1	132 1	4	75	16 2	46 3	6 3	ις w	3	2 1
493	15	60,3	.046		2,92	99.1		94.7		95	118 1	133 1	57 1	81 2	23 2	61 3	3	57 40	1 2	0 1
464	1	62.5	.026	-		•	92.5	95.9	80	92	113 1	127 1	51 1		202	53 3	23 35	56 40	11.	
495	12	60,3	.046	~	2.88			7.06		91	113 1	129 1	55 1	82 2	26 2	62 3	0	19 38		9
AVERAGE		62,3	.027		2,81	4.66	91.6	95.5	6.8	9.6	115 1	1 30 1	54 1	80 2	212	55 3	25 36	60 39	1 9	0

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970

AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

REGULAR-PRICE GASOLINE

DIST. 15 PACIFIC NORTHWEST WESTERN OREG.

		GR.	SULF,	GUM	LEADA	OCTANE	NE NUMBER	BER	RVP			0	ISTI	LLAT	DISTILLATION	ASTM	086			
	SAM		ASTM	ASTE	ASTM	RESA	MOT,	R+M	ASTM	TEMP	TEMPERATURE, F (CORRECTED	REP	F (C	ORRE	CTED	TO 760		WM HG)		
ITEM	PLES	0287	01266	0381	0526	ASTM	ASTM		0323			PE	PERCENT		EVAPORATED	4 TED			RES	S L055
		API	H	Ð	G/GAL	0908	0357	2	LB	0.0	5 1	0	20 3	30 5	50 70	06 0	6	M P	34	34
496	-	62.6	0.010	-	2.43	93.4	87.1	90.3	10.6	92	105 1	14 1	32 1	52 1	98 26	54 346	6 37	4 399	1	2.
497	10	61.2	.040		2.57	0.46	86.6	90.3	8.5	91		123 1	40 1	58 1		46 34	9 36	4	-	0 1.
498	۳	62.7	.025		1.54	91.0	84.2	87.6	0.0	95	-	9	4	-	200 24	47 34	3 37	8 42		8 1.
400	~	62.1	.033		2.63	93.8	86.5	90.2	8.8	96	113 1	24 1	42 1	60 2	CV	52 34	9 38	3 41	0	1
200	_	9.09	.021		2.45	93.5	86.3	89.9	8.5	63	113 1	26 1	49 1	70 2	12 2	51 34	6 37	6 41		100
501	10	62.6	.030	-	2.59	93.9	86.5	90.2	8,0	6 3	110 1	22 1	39 1	57 1	40	17 35	5 39	2 42	1 4 0	-
502	•	61.8	.021	_	2.34	92.8	86.8	89.8	9.6	91	105 1	17 1	10	54 2	200 26	50 34	3		9	1
503	10	61.9	.023	-	2.39	93.7	86.8	90.3	9.1	92	109 1	N	-	0		52 34	5	0	2	10
504	10	80.8	•	-	2.49	93,3	86,3	89.8	8.9	94	112 1	27 1	48 1	69 2	13 26	51 35	1 38	4	1	-
505	10	60.09	.033	-	2.31	0.46	96.6	90.3	9.4	92	~	1		57 1	6	0	'n	3 420	10	2
AVFRAGE		61.7	.028	-	2.37	93.3	86.4	60.68	0.1	63	110 1	22 1	141 1	160 2	202 2	54 34	8 38	2 41	0.1 4	1.5
AMPLES	76										1			1	1					

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970

AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

DIST. 15 PACIFIC NORTHWEST CONTINUED WESTERN WASH. AND WESTERN DREG.		
IST. 15 PACIFIC NORTHWEST CON WESTERN WASH, AND WEST	JE0	OREG.
IST. 15 PACIFIC NORTHWE MESTERN WASH. A	-CON	WESTERN
1ST. 15	RTHWE	ASH.
IST.	PACIFIC	MESTERN
	IST.	

		GR.	SULF	GUM,		OCTA	DCTANE NUMBER	BER	RVP,			٥	ISTI	DISTILLATION, ASTM 080	ION	AST	80			
2	NAN O	ASTA	ASTM	ASTM	AS	RES	MOTA	X :	ASTM	TEMPE	RATE	RE,	F (C	MPERATURE, F (CORRECTED TO	CTED	10	760	BH MM	3)	2001
	2 1	API	0 M	7 5 X		0.00	0357	~	LB	186	5	10 2	20 3	30 5	50 70	060	56 0	144	G .	
506	-	64.5	0.010	-		99.4	92,1	95.8	10.2	91	1 601	1 61	37 1	57 1	97 2		308 3	37 3	77 1.	0 1.
507	10	8	.013		2.74	100.0	91.8	95.9	9.5	91		124 1	48 1	70 2	208 2		12 35	0	394 1.	.0 1.
508	6	65.0	.004	•	2.06	2.66	91.9	95.8	9.6	91	107 1	122 1	46 1	168 2	210 2	48 3	309 3	34 3	376	7 1.
509	~	61.9	.010			100.3	91.7	0.96	0.6	91	-	126 1	52 1	77 2	15 2	49 30	60	_	390	8 1.
510	_	60.7	900.	-	2.30	100.1	91.2	95.7	0.6	94	111	24 1	45 1	69 2	217 2	63	321 3	46 3	367	9 1.
511	10	61.9	.011		2.21	100.2	91.4	95.8	6.0	06	107 1	26 1	51 1	76 2	216 2		308 33	۵	389	9 1.
512	90	63.6	.017	_		99.3	91.7	95.5	7.6	88	103 1	117 1	37 1	60	198 2	37			-	.0 1.
513	10	61.9	.011			6.66	91.5	95.7	9.1	91	107	123 1	46 1	69 2	13 2	52 3	10 3	_	390	9 1.
514	10	80.8	.007		2,03	6.66	6.06	95.4	9.1	26	108 1	123 1	146 1	_	223 2	en Os	25 3	C.	393 1.	1 1.
515	10	59.9	.018		2.63	100.0	91,3	95.7	9,3	9.1	110 1	125 1	150 1	74 2	216 2	255 3	18 3	350 3	394 1	00 1.4
AVFRAGE		62.1	.011	-	2.20	000	91.6	95.8	9.3	0	108	123 1	46 1	169 2	211 2	50	312 3	42 3	386	9

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

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TABLE 3. - MOTOR GASOLINE SURVEY, SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED DIST. 16 NORTH CALIFORNIA -- CONTINUED

			SULF	GUN	LEAD,	DCTANE	NE NUMBE	BER	RVP				DIST	DISTILLATION	TION		ASTM D86	9 0			
	SAM	ASTH	AST	ASTM	S	RESA		Z+X	S	TEMP	EMPERATURE,	URE,	âa.	CCORRECTED	ECTE	0 10	10 760	I	HGO		
TEM	PLES	28	012	0381	0526	ASTR	ASTM	:	0323			۵.	ERCENT		EVAPORATED	RATE	0			RES	LOSS
		0	MT K	M	G/GAL	0000	~	2	LB	186	S	10	20	30	20	10	06	65	EP	×	
528	6	57.7	0.006		2.72	6.66	92.3	96.1	9,3	93	110	124	148	174	218	260	325	350	412	9.0	
529	9	3.	.053	~	3.09	1001	91.0	95.6	9,3	92	101	121	146	172	214	249	320	352	395	80	-
530	-	52.4	.010	-	3.10	100.3	93,3	96.8	8,5	94	116	138	174	201	239	276	325	304	393	1.0	8
531	0		.015		2.41	100.0	91.9	0.96	9.1	92	110	128	158	187	233	279	345	371	407	1.0	-
532	6		•	•	2.67	100.1	-	95.8	7.8	6	116	130	152	174	9	260	330	356	397	00	1.
533	0		.012	CV.	2,92	100.4	91.4	95.9	8.5	92	110	126	153	179	221	265	333	368	412	1.0	-
534	6	-	.056		3,26	90.4	91.6	95.5	10.5		108	123	153	180	224	264	342	378	417	0.	
535	0	50.4	.018		2.94	99.8	91.0	95.4	8,2	96	113	126	143	161	202	250	8	355	404	0.	-
536	40	.0	.017			7.66	91,3	95.5	80	96	114	126	144		202	248		358	407	0.	
537	٥		• 025		2.18	7.66	6.06	95,3		93	111	127		176	222	260	327	360	412	1.0	-
538	•0	57,2	.040	~	3.41	90.4	91,3	95.4	10.5	88	100	116	143	172	222	265	331	362	418	1.0	N
539	0	7.	.014	-	2,69	100.0	91,6	95.8	8.9	91	109	129	160	188	232	274	339	369	405	1.0	-
AVERAGE		57.9	₹00.	-	2.86	6.00	9116	95.8	0 6	6	110	126	152	177	220	263	330	362	A 0 7	0	1.6

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS--CONTINUED

DIST. 17 SOUTH CALIFORNIA

							E.	REGULAR-PRICE GASOLINE	-PRIC	E GAS	OL INE								
ITEM	SAM	ASTM D287 API	SULF. ASTH D1266	GUM, PSTM D381	LEAD, ASTM DS26 G/GAL	ASTM ASTM DOOG	MOTA R+	z ı	RVP. ASTN D323 L8	TEMPE	PERATURE,	DISTIL E, F (CO PERCENT 20 30	CORRECTED SENT EVAPOR 30 50 70	ATION, AST RECTED TO EVAPORATED 50 70 9	AST TO TED	760 MM	E P	⊼ m ≈ N	Loss
540	יחי	57.1	0.094	(2.19	47	85.2	7.00	9.6	80	-	142			m	97	414	1.0	1.3
542	7 N	58.3	.088	1 N	2,31	0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	89.5	9.2	93	99 116 09 122	2 145	168	217	274 35	36 39(422	00.	1.2
13 to	401	57.8	.072	<i>c</i> ₁ ⋖	1.05	0 0 0	83.2	90.1	10.0	0 0 0	03 11	5 136	156	201	255 3 278 3	42 37	2 412	0.0	1.3
545	<7 (E)	010	.091	~ ~	1.58	9.00	80 80 80 80 80 80 80 80	67.5	9.7	000	105 11	9 142	164	212	300 37	1 37	7 427	0.6	1.01
547	000		080	→4		44	8 8 10 10 10 0	00	200	~ 0		4.5	-	4 9	4 -	7 37	5 410	00	1.4
549	0 4	50.00 63.00	.054	~	2.40	93.8	80 80 80 80 60 80	0.00	6.0	91	11 12	9 141	162	209	266 36:241 32:3	N 40	4 1 1 1	0:1	4.6
551 AVERAGE	60	0 0	.074	~~	R) 60				D 0	0 0	04 122	15	180	•	269	5 38	1 409	00	1.8
AMPLES	83																		

TABLE 3. - MOTOR GASOLINE SURVEY. SUMMER 1970
AVERAGE DATA FOR DIFFERENT BRANDS -- CONTINUED

DIST. 17 SOUTH CALIFORNIA -- CONTINUED

ATION, ASTM DBO	TO 760 MM HG)	EVAPORATED RES LOSS	50 70 90 95 EP % %	217 262 318 343 392 0.7 1.1	6 264 330 360 4	220 266 325 353 395 .9 1.1	22 264 324 355 406 .9 1	7 259 329 365 407 1.0	12 256 318 346 388 .7 1	8 325 357 4	08 257 328 364 411 1.0 1.	11 255 326 358 406 1.0 1.	12 262 328 303 403 1.	22 266 316 343 405 1.0 1.	25 269 325 351 39	216 262 324 355 402 .9 1.5
DISTILLATION	MPERATURE, F (COR	PERCENT	P 5 10 20 30	-	101 117 141 16	105 119 143 1	110 127 153 1	1 110 126 150 174	106 119 140 1	108 124 146 1	107 120 140 16	110 125 145 1	103 118 140 16	110 126 150 17	108 123 147 1	1 107 122 145 168
RVP.	+M ASTM TE	m	LB 18	5.9 10.2	30.0	5.6	5.9 9.5	95.8 8.9 9	5.9 9.8	5.5 8.7	5.4 9.0	5.7 8.4	5.4 9.5	6.8	5.9 9.1	95.8 9.3 9
DCTANE NUMBE	ES. MO	STE ASTE	035	0000 91.7	9.7 91.9	2 91.4	0.0 91.8	0.1 91.5	0.0 91.6	6 06 0	6.06 6.6	9.8 91.6	9.5 91.3	0.1 91.7	.1 91.6	100.0 91.5
GUM, LEAD,	STH ASTH	0526	MG G/GAL	2.84	2 68	61 1	2.60	2.85	2.41	6.63	2.77	2.82	3000	2.74	2.89	2.73
SULF	ASTH		3	0.024		029	.02	40.054	00	0.3	_	3 036	0.0	0 021	3 .026	
GR	-	028	API	50.8		6	7		(S)	57.	3.0	59.		56	~	57.
		TTEM		552	500	40.00	20.00	40.00	557	858	9 10	260	10	562	9	

TABLE 4, - MOTOR GASOLINE SURVEY, SUMMEN 1970
AVERAGE DATA FOR BRANDS IN EACH DISTRICT

				8					REGUL	A	CE GA	SOLIA	ш				- 1					
0	DISTRICT NO.	NO. OF	1 X	A Z S	ASTM	ANDE	ASTM	AFS. NO	ME NUMBER	=	ASTE	TEMPE	RATU	EMPERATURE, F CORRECTED	STIL	F CORRECTED		TO 760	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	HG)		
	AND NAME	BRANDS			01266	D381	0526	TLOV	ASTH		0323			PER	PERCENT	EVAF		ED			RES	LOSS
				API	24 上来	3	G/GAL	0908	0357	2	LB	186	5 1	0 20	30	20	20	06	95	e e		34
week	NORTHEAST	10	49	8.09	0.030	-	2.32	0.50	86.8	0	0	0	0.5	10 13	9 1 0	1 208	267	3.6.3	37.6	0 1 0	9	9
N	MID-ATLANTIC COAST	0	291	-	.036	-	2,35	94.7		80.06	9.5		•	19 13	. 0				376	4 1 2		9
(1)	SOUTHEAST	20	238	61.2	.037	-	2,55	94.6	86.9	90.06	9.5	92	1001	O.			5 261	מיי	375	413	0	9
*	APPALACHIAN	19	212	61.2	.033	-	2.34	94.5	87.1	90.06	9.6							m	375	413	0	7.1
in	MICHIGAN	50	122	61.0	.039	-	2.54	94.8	86.8	8.06	9.5	_	_	2			_	(7)	3/5	414	. 7	25
9	NORTH ILLINGIS	15	113	9	.050	~	2.56	6.06	86.8	6.06	9.4	_	1 90	60	-				369	404	1.0	7.
~	CENTRAL MISSISSIPPI	19	114	61.1	.035	~	2.55	94.5	87.1	90.06	6.0	_	- Unit	27 147				(2)	373	410	6	
•	LONER MISSISSIPPI	19	172	61.2	.034	**	2.54	94.3	86.7	90.5	9.1	93 1	101	24 14				344	375	415	1.0	1,3
0	NORTH PLAINS	16	73	62.1	.073	~	2,35	92.5	85,2	68.8	9.1	92 1	10 1	c	1 160	-	3 254	331	364	401	0	10
10		11	120		.034	-1	2.41	92.4	85.7	69.1	8.8	95 1	-	24 143	10			6	368	411	1.0	9 1
		21	168	62.2	.035	-	2.78	93.0	86.5	89.8	00	93 1	-	N.		4 207	7 255	C	368	408	0	2.1
12	TEXAS	10	117	62.2	.030	-	3.04	93.9	87.3	9006	8,8		-	-	2 15	0			357	407	0	
13	MOUNTAIN	21	342		.052	2	2,33	92.2	85.0	88.6	0.0	98 1	117 1	0	9 1 6	0	261		375	412	0	2
14	NORTH MOUNTAIN STATES	13	111	80.8	.063	N	2.52	93.1	85.3	89.3	8.8		~	28 14	0	0	3 264	340	372	90	1.0	4
13	PACIFIC NORTHWEST	10	16	61.7	.028		2.37	93,3	86.4	60.68	9.1	93 1	10 1	22 14	1 16	0	2 254	348	382	414	1.0	1.5
16	NORTH CALIFORNIA	12	79	59.4	.029	2	1.97	93.5	85.7	90.68	0.6	94 1	12 1	_	9 17	2 215	5 259	328	358	401	0	5.1
17	SOUTH CALIFORNIA	12	03	58.7	.074	2	1.83	93.1	84.9	0.68	9.1	92 1	-	-	3 16	4	1 269		380	416	1.0	5
		AVERAGE		61.1	.042	_	2.43	93.8	86.3	90.1	9.1	93 1	110 1	123 143	3 163	3 207	7 260	339	372	410	0	5.1
	•	SAMPLES 2,495	20405									1			F	1		1				

TABLE 4, - MOTOR GASOLINE SURVEY, SUMMER 1970 AVERAGE DATA FOR BRANDS IN EACH DISTRICT -- CONTINUED

									PREMI	PREMIUM-PRICE GASOLINE	CE GA	SOL 1	NE									
0	DISTRICT NO. AND NAME	NO. OF SAM-	PLES	GR. ASTN D287 API	SULF. ASTH D1266	ASTM D381	LEAD, ASTH 0526 G/GAL	RES. ASTM D908	UCTANE NUMBER ES, MOT, R+ STM ASTM ==	BER R+M	RVP, ASTM 0323 LB	TEMP IBP	TEMPERATURE, F (CORRECTED PERCENT EVAPUR	DI DER FER	DISTILLATION, F (CORRECTED PERCENT EVAPURA 20 30 50 70	RRECT EVAP 50	4(0	ASTM 080 TO 760 H TED 90 95	1	EP R	RES L	1088
- 01	NORTHEAST MID-ATLANTIC COAST SOUTHFAST	16 19 20	294	60.4 59.5 60.0	0.013	0	2,72	100.4	92.1	96.3	9 9 9	9 9 9	103 1 105 1	117 13 119 14 119 14	139 164 142 168 141 164	4 216 8 221 4 217	259	318	349	394 0	000	~~ 0
	N D D D D D D D D D D D D D D D D D D D	220	215	0 4 10	7100		0000	100.1	92.5	0 0 0 0 0 0 0 0 0	000	000	999	120 14 123 14	43 167 49 175 45 171			323 323 318		400	0.00	~ 60 0
- co	CENTRAL MISSISSIPPI LONER MISSISSIPPI NORTH PLAINS	206.50	172		020.	0	4 50 50	1000.0	9 9 9 9	9 9 9 9 0 0 0 0 0 0	9 9 9	0 0 0	11001		m ep =		25.5	323	356 356 357	398		99.
0-0	CENTRAL PLAINS SOUTH PLAINS SOUTH TEXAS	1221	150		.019		2.95	99.0	925.3	96.3	P0 00	4 61 10 10		126 14	49 171 48 172 50 172		259	326 330 324	8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	404 404 399		6 F 4 1
7 4 50 9	COCAT MOCKAPIES NOTIFICATION STATES PACIFIC NORTHERS NORTH CALIFORNIA	1202	111	62.3		V == ==	N - 0 - 0	2 0 0 0 2 0 0 0	9 9 9 9		0 80 80 80	4000	. m eo o		154 180 146 169 152 177	0 221 9 211 7 220		325		396 1		มพ.ก. เ
~		AVERAGE SAMPLES 2,483		50	.036	2-	2.73	99.8	91.5	95.8	9.3	92	70	122 14	145 168			324	355	399	9.	5.0

TABLE 5. - MUTOR GASULINE SURVEY, SUMMER 1970
DATA FOR SUME ADDITIONAL GHADES

ISTRICT		œ	SULF,	\supset	LEAD,	OCTANE	N	BER	RVP,			٥	DISTILLATION	LLAI	LON	ASTM	080			
ND ITEM	SAM	ASTM	ASTM	ASTM	S	لعا	MOT.	I + X	ASTM	TEMPE	ERATU	TURE, F CCURRECTED	2) 4	URKE	CTED	1.0	76U M	DH W	_	
NUMBERS	PLES	28	2	3	0526	ASTM	ASTR		0323			PE	ERCENT	1 .	APOR	EVAPORATED		-	RES	S LUS5
		0.	M LM	₩.	G/GAL	0	0357	2	LB	186	5 1	၁	20 3	30 5	2 05	06 0	< 6	F.P	948	%
564	2	57.8	0.030	8	1.27	93.7	85.7	89.7	7.6	91	106 1	21 1	46 1	70 2	22 2	87 34	16 30	9 41	7 10	0 5 0
565	-	-	.020	-	2.44	95.7	87.3	91.5	9.4	82	94 1	09 1	32 1	4 2	01 2		5 35	6 408	-	0 2.0
566		6	.029	2	1.63		85.2	89.0	6.6	86	98 1	12 1	2 1	52 2	02 2	64 3	3 38	3 42	0 1.	0 2.0
	5	57.7	.027	2	1.09	93.1	85,1		9.5	92 1		20 1	-	68 2	26 2	89 3	3 38	1 42	6 1.	1 1.9
2 568	~	6	.024		1.43	m		0		89	103 1	17 1	9	2	14	8	4 3	2 41	20	3 2
695	9	-	.053	2	1.84	2	85,3	88.7	0.6			20 1	9	1 2	00	58 3	18 37	0 4	9 1.	2
570	-	0	.023	2	1.70	m		89.5	6.0		99 1	14 1	4 1	56 2	08 2	73 3	0 3	6 41	0 1.	0 2.0
4 571	4	6	.020		1.11	2	85.5	89.1	6.6	96	112 1	22 1	5	67 2	21 2	82 3	17 37	5 41		0 1.
	4	80	.016	~	1.49	N		6	7.6	94	111	22 1	5	7 2	16 2	8	5 3	1 41	9	0 1.9
5 573	~	0	.019	-	1.34	8			7.6	91	106 1	21 1	2	2	08 2	63 3	4 3	7 42	2	5 2.
5 574	٣	6	.010	2	1.46	N	85.5	89.1	9.6		106 1	21 1	44 1	67 2	18 2	82 3	8 3	0 42	۳,	-
575	-		2		* .00	2	83,3									•		•	-	•
925 2		58.2	090.	-	5	9006	4		6.6	94	113 1	126 1	51 1	72 2	215 2	61 3	38 37	5 4	21 1.2	e
577	•			•	* .00	92.0	83.8	87.9	,							•		•		
VERAGE		58.9	.028	0	- 23	0 0 A	AS	408	0	10	105	10011	1 1 4	4	213	273 34	C C	17 01	17 1	0

TABLE 5. - MOTOR GASOLINE SURVEY. SUMMER 1970
DATA FOR SOME ADDITIONAL GRADES--CONTINUED

DISTRICT		GR.,	SULF		LEAD,	OCTANE	NE NUMBEI	BER	RVP			0	ISTIL	DISTILLATION,	NO	ASTH	080			
AND ITEM	SAH	ASTH		ASTH	ASTH	RESA		R+R	SI	TEMP	PERATURE,	REA	FCC	OC	TED	10 7	760 MM	(HG)		
NUMBERS	PLES	0207	_	301	0526	ASTH	ASTM		0323			PE	PERCENT		EVAPORATED	TED			RES	LOS
		API	NT X	MG	G/GAL	0000	6	23	LB	186	5 1	0 20	30	20	70	06	95	e E	×	×
	6	9.09	0.007	8	1.51	96.2	87.0		9.6	60	106 1	20 1	42 16	68 21	-	6	4 34	4 382	0.8	1.2
2 579	17	59.0	.029		1.28	97.0	87.1	92.1	9°6	99	106 1	18 1	40 16	66 21	~	3	'n	39	_	-
3 560	m	61.2			2.69	96.1	88,3	92.2	0.0	06	110 1	20 1	38 10	1 2	5 25	m m	0 36	6 405	*	-
3 561	ın	58.9	.024		1.15	97.0	87.0	92.0	9.6	91	106 1	17 1	36 15	57 21	•	5	7 35	9 412	•	-
4 582	~	61.1	.037	-	1.72	96.8	88.2	92.5	9.4	91	106 1	17 1	37 16	0	6	12 32	2 35	6 398	•	-
7 583	6	58.8			1.63	6.96	86.5	-	10.2	86	110 1	4	50 17	74 22	3	6 3	38	6 412	80	-
8 564	15	58.7	.023	•	1.62	9	87.6	92.2	9.4	06	109 1	121	4	70 22	0	7 3	11 34	1 384	•	
11 585	•	60.5	.027		1.47	97.0	88.0	2	8,1	92	113 1	6 1	6 1	N	N	9		1 370	•	44
12 586	0	61.7	.021		2.11	96.6			8.8	92	106 1	-	3 1	52	6	8		4 401		1.
13 587	•0	63.1	.025		2.68	47	87.9		7.7	9 6	119 1	130 1	48 10	64 20	12 24	9	36	4	6.	•
15 588	m	61.2	.013	•	2.38	95.7	88.2	92.0	6.3	96	113 1	-	50 17	71 21	64	m -	36	5 419	-	1.3
16 589	-	59.5	.010	~	3.00	96.3	89.9	93.1	8.4	100	120 1	5 1	50 17	74 22	11 26	12 31	5 33	6 369	1.0	-
17 590	6	57.7	.056		2.53	95.8	87.2	91.5	80.6	89	104 1	121 1	46 10	69 22	0 2	2	0 37	8 426	œ.	1.2
AVERAGE		60.2	200	-	40°	66.3	87.8	92.1	0.0	0	1101	23 1	1 0 0	67 21	36 1	32	5 35	300	α.	+

TABLE 5. - MOTOR GASOLINE SURVEY, SUMMER 1970
DATA FOR SOME ADDITIONAL GRADES--CONTINUED

CR., SULF, GUM, LEAD, DCTANE NUMBER RVP, DISTILLATION, ASTM ASTM ASTM ASTM ASTM ASTM ASTM ASTM																					
PLES D287 D1266 D381 D526 ASTM ASTM === D323	DISTRICT	2		SULF,	•	LEAD,	OCTA	VE NUM		RVP			0	STIL	LATI	- «ND	ASTM	080			
Z 60.9 0.008 1 3.25 102.4 93.5 98.0 9.7 87 102 115 135 158 209 252 316 1 59.8 .007 1 3.37 102.3 93.8 98.1 9.2 86 101 115 135 158 209 252 316 1 59.8 .007 1 3.34 102.7 93.9 98.3 9.0 86 102 115 135 158 209 252 318 1 59.8 .007 1 2.77 101.9 94.5 98.3 9.6 93 109 121 142 170 219 258 317 2 2 58.1 .006 1 2.73 102.2 94.3 98.3 9.6 93 109 121 143 168 225 260 305 1 71.4 .010 1 2.73 102.3 93.9 98.1 7.0 106 119 128 149 180 122 2 26 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	TEM			AN LANGE	ASTE	ASTM	RESP	MOTA	X 1	ASTM	TEMPE	RATU	REP		RREC	TED	10 7	MM OS	(9H	0	0 0 0
2 60.9 0.008 1 3.25 102.4 93.5 98.0 9.7 87 102 115 135 158 209 252 316 159 017 1 3.37 102.7 93.9 98.1 9.2 86 101 115 136 159 213 253 318 159.8 .007 1 3.34 102.7 93.9 98.3 9.0 86 102 119 142 170 219 258 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 317 25.8 31.8 30.8 30.8 30.8 30.8 30.8 30.8 30.8 30	0 K			7	MG	76A	00	D357	2	32 LB	IBP			36		70	06	65	٩	2 3 ₩	
2 61.1 .017 1 3.37 102.3 99.8 98.1 9.2 86 101 115 136 159 213 253 318 159.8 .007 1 3.34 102.7 99.9 98.3 9.0 86 102 119 142 170 219 258 317 2 58.1 .002 1 2.77 101.9 94.5 98.2 9.3 94 112 123 145 171 225 260 305 1 59.8 .070 0 2.93 102.2 94.3 98.3 9.6 93 109 121 143 168 225 260 305 1 71.4 .010 1 2.20 100.5 97.6 99.1 7.0 106 119 126 144 163 203 226 262 262 1 60.9 .010 1 2.25 101.5 94.7 98.1 7.4 94 119 130 150 170 213 246 319 2 64.2 90.1 7.8 99.1	1 591	9		9.000	1	3.25	102.4	93.5	•	7.6	87 1	1 02 1	yes	5 1	8 20	9 25	2 31	349	403	1.0	100
1 59.8 .007 1 3.34 102.7 93.9 98.3 9.0 86 102 119 142 170 219 258 317 25 58.1 .002 1 2.77 101.9 94.5 98.2 9.3 94 112 123 145 171 225 260 305 2 58.1 .006 1 2.73 102.2 94.3 98.3 9.6 93 109 121 143 168 225 260 305 1 59.8 .070 0 2.93 102.3 93.9 98.1 6.9 101 133 148 169 188 221 246 290 1 71.4 .010 1 2.20 100.5 97.6 99.1 7.0 106 119 128 144 163 203 226 262 1 60.9 .010 3 2.25 101.5 94.7 98.1 7.8 94 119 130 150 170 213 246 319 2 6 6.0 9 .100 1 2.87 102.2 94.8 98.1 7.8 92 115 125 144 165 212 245 310 24.8 98.1 7.8 92 115 125 144 165 212 245 310 24.8 98.1 7.8 97 126 135 152 176 210 234 323 305 305 305 305 305 305 305 305 305 30	2 592	9	•	.017	-	3,37		93.8	98.1	9.5	86 1	_	5 1	1 9	21	3 25		351	402	1.0	1 . 8
4 58.1 .002 1 2.77 101.9 94.5 98.2 9.3 94 112 123 145 171 225 260 305 25 28.1 .006 1 2.73 102.2 94.3 98.3 9.6 93 109 121 143 168 225 260 302 1 59.8 .070 0 2.93 102.3 93.9 98.1 6.9 101 133 148 169 188 221 246 290 1 71.4 .010 1 2.20 100.5 97.6 99.1 7.0 106 119 128 144 163 203 226 262 1 60.9 .010 3 2.25 101.5 94.7 98.1 7.4 94 119 130 150 170 213 246 319 2 60.0 10 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 60.0 10 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 60.0 10 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 60.0 10 10 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 60.0 10 10 10 10 10 10 10 10 10 10 10 10 10	3 593	S		2000		3,34	102.7	93.9	8	0.6	88	N	6	2 1		25		348	400	1.0	2.0
2 58.1 .006 1 2.73 102.2 94.3 99.3 9.6 93 109 121 143 168 225 260 302 1 59.8 .070 0 2.93 102.3 93.9 98.1 6.9 101 133 148 169 188 221 246 290 1 71.4 .010 1 2.20 100.5 97.6 99.1 7.0 106 119 128 144 163 203 226 262 1 60.9 .010 3 2.25 101.5 94.7 98.1 7.4 94 119 130 150 170 213 246 309 1 62.3 .010 1 2.90 101.3 94.8 98.1 7.6 92 115 125 144 165 212 245 310 2 64.8 .100 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323 2 64.8 .100 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323	4 594	S.	•	.002	-	2.77	101.9	94.5	80	9.3	94	C	6		1 22			326	369	1.0	1,5
1 59.8 .070 0 2.93 102.3 93.9 98.1 6.9 101 133 148 169 188 221 246 290 171.4 .010 1 2.20 100.5 97.6 99.1 7.0 106 119 128 144 163 203 226 262 1 60.9 .010 3 2.25 101.5 94.7 98.1 7.4 94 119 130 150 170 213 246 309 1 62.3 .010 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 64.8 .100 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323 2 61.7 .028 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323	5 595	S		900°	-	2.73	102.2		. 8	9.6	93 1		1 1	3					373	• •	1.4
1 71.4 .010 1 2.20 100.5 97.6 99.1 7.0 106 119 128 144 163 203 226 262 262 262 010 3 2.25 101.5 94.7 98.1 7.4 94 119 130 150 170 213 246 309 1 62.3 .010 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 64.8 .100 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323 2 64.8 .100 1 2.87 101.0 00.6 98.3 81 94.14 126 135 152 176 210 234 323	3 596	1 59	60	070.	0		102,3	93.9		6.9	101	m	8	9 1	22	1 24		320	374	1.0	2.0
1 60.9 .010 3 2.25 101.5 94.7 98.1 7.4 94 119 130 150 170 213 246 309 1 62.3 .010 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 64.8 .100 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323 61.7 .024 1 2.84 101 0 04.4 98.3 61 04 114 126 146 169 215 248 305	14 597	1 71	4.	.010	-			-	99.1	7.0			8	4	20	m			370	1.0	1.0
1 62.3 .010 1 2.90 101.3 94.8 98.1 7.8 92 115 125 144 165 212 245 310 2 64.8 .100 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323 41.7 .02a 1 2.84 101 0 04.4 98.3 81 04 114 126 144 169 215 248 305	5 598	1 60	6.	.010	60		101.5	7.46		7.4	94 1	_	0	0	21	6		വ	399	1.0	1.0
2 64.8 .100 1 2.87 102.2 94.9 98.6 5.0 99 126 135 152 176 210 234 323	6 2 3 9	1 62	e. •	.010			101.3	4		7.8		_	-	4					380	1.0	1.0
A1 7 024 1 2 A 101 0 04 A 08 3 B 1 04 114 126 126 166 215 248 305 3	009 1	9	•	.100	-	- 49	102.2	4	8			**	'n	2 1				(C)	384	1.5	1.5
	AVERAGE	61	. 7	.024		2.86	101.9	94.6	98.3	8.1	94	114 1		9	0	24	30	338	385	1.0	1.5

TABLE 6 - MOTOR GASOLINE SURVET, SUMMEN 1970
AMALYSES OF LOW-LEAD CONTENT GASOLINE

ASTM ASTM ASTM ASTM ASTM ASTM ASTM ASTM				GR.,	SULF	GUMA	LEAD,	0CTA	OCTANE NUMBER	BER	RVP			٥	ISTI	DISTILLATIONA	NO	ASTA	080			
BOSTON SAMPLES D287 D1266 D381 D326 D357 2 L8 L8 S L9 L9				ASTM	ASTR	ASTM	ASTE	RESP	MOTA	X+X	ASTH	TEMP	ERAT	IRE,	5) L	DRHEL		10 760	NH 09	WHG)	L	
## ## ## ## ## ## ## ## ## ## ## ## ##	DISTRICT		SAMPLES	0287	01266	0381	0526	ASTM	ASTM		0323			PE	RCEN		PORA	TED			RES	L055
3 58.0				API	M L	S X	G/GAL	0908	0357	~	LB	186						06	95	<u>u</u>	*	**
2 58.0	-	BOSTON	9	48.4	0.012		00.0	101.6	90.6	96.1	9.5	86	26	15 1	44 1			' '	346	988	0.8	2.2
3 \$3.4	2	HARTFORD	2	58.0	•		.51	6.96	86.9	91.9	9.5	68	110		47 1	74 2		0 312	2 34	1 390	. 8	
# \$4.1 .002 0 .05 102.0 90.6 96.3 10.1 90 106 120 148 179 220 1 1 659.1	2	BALTIMORE	e	53.4		•	00.	101.4	1.06	96.1	9.5	9.6	96	_	_		_			_	.7	2,3
1 59.1	2	_	•	54.1	.002	0	• 05	102.0	9006	96.3	10.1	06	901	•	48 1	79 25	_	7 284		361	1.2	1.8
1 62.3 .02570 95.3 65.1 90.2	2	_	-	59.1		•	• 50	9.96	87.4	92.1	9.6	67	102	15 1	40 1	65 21	11 24	9 31	5 348	8 384	-	2
4 54.5 .007 2 .00 100.6 90.4 95.6 10.2 91 108 123 149 183 225 2 57.4 0.0 101.6 90.8 96.1 9.7 90 108 123 149 183 225 3 53.6 0.0 101.6 90.8 96.2 9.3 90 108 128 158 188 220 1 57.0 - 0.0 101.0 90.6 95.8 9.5 86 105 120 147 217 5 53.3 .002 1 .00 101.0 90.6 95.8 9.5 86 105 120 147 217 5 53.9 .010 0 .00 101.1 90.4 95.8 10.2 86 103 118 146 178 225 4 53.9 .010 0 .00 101.1 90.4 95.8 10.2 86 103 118 146 179 231 1 55.7 .002 0 .00 101.1 90.2 95.8 10.7 89 101 115 142 173 230 1 55.7 .002 0 .00 101.1 90.6 95.8 10.7 89 101 115 142 173 230	2		-	62.3	.025		.70	95.3	85.1	80.5	•							•			•	*
1 54.0 .020 1 .24 96.7 86.2 91.5 10.6 95 107 117 140 170 233 35.4	2	PHILADELPHIA	4	54.5	1000	N	00.	100.8	90.4	92.6	10.2	91	108	-	_	83 22	35 24	7 299	9 330	0 370	9	1.9
2 57.4	2	PHILADELPHIA		54.0	.020	-	.24	96.7	86.2	91.5	10.6	95	107	~	_				4 385	ব	1.0	2.0
3 53.6	2	PHILADELPHIA	~	57.4		•	.43	97.0	67.2	92.1	7.6	98		-	~			8 316			.7	1.8
1 57.039 97.0 87.1 92.1	8	RICHMOND	6	53.6			00.	101.6	8.06	96.2	9,3	06	-		-				0 326	6 364	-	
3 55.4 =00 101.0 90.6 95.8 9.5 86 105 120 147 181 226 157.5 .018 0 .39 97.2 86.6 91.9 10.1 92 103 111 127 147 217 56.5 91.5 95.8 10.1 92 103 111 127 147 217 147 217 145 2	2	RICHHOND	-	57.0			.39	97.0	87.1	92.1								•	•			•
1 57.5 .018 0 .39 97.2 86.6 91.9 10.1 92 103 111 127 147 217 15.5 53.3 .002 1 .00 101.5 91.0 96.3 9.7 87 99 119 148 178 225 1 .25 53.9 .010 0 .00 101.1 90.4 95.8 10.2 86 103 118 146 178 225 1 .25 53.9 .014 1 .00 101.4 90.2 95.8 10.7 89 101 115 142 173 230 1 .25 7 .002 0 .00 100.2 90.6 95.4 9.6 95 110 124 152 158 212 1 .25 7 .002	E	HIAHI	m	55.4	•	•	00.	101.0	9006	95.8	9.5	86	105	_	-			3 310	0 334	4 370		1.8
5 53.3 .002 1 .00 101.5 91.0 96.3 9.7 87 99 119 146 178 225 1 .00 101.5 91.0 96.3 9.7 87 99 119 146 178 225 1 .00 101 0 0 .00 101.1 90.4 95.8 10.2 86 101 115 142 173 230 1 .00 101.4 90.2 95.8 10.7 89 101 115 142 173 230 1 .00 101.5 97.1 97.8 92.8 9.0 86 100 114 136 156 212 1 .00 100.2 90.6 95.4 9.6 95 110 124 152 156 212	m	HIAHI	-	57.5	.018	0	.39	97.2	96.6	91.9	10,1	92	103	11 1	4		_		8 340	4	1.0	2.0
1 56.531 97.3 87.0 92.2	e	ATLANTA	5	53,3	*005	-	00.	101.5	91.0	96.3	7.6	87	66		~		-		7 332	2 370	6.	-
\$ 53.9 .010 0 .00 101.1 90.4 95.8 10.2 86 103 118 146 179 231 5 15 5 .014 1 .00 101.4 90.2 95.8 10.7 89 101 115 142 173 230 1 5865 46 97.1 87.8 92.5 9.0 86 100 114 136 156 158 212 1 55.7 .002 0 .00 100.2 90.6 95.4 9.6 95 110 124 152 165 227	e	CHARLOTTE	-	56.5	•		.31	۳,	87.0	92.2	•							•				
5 53.5 .014 1 .00 101.4 90.2 95.8 10.7 89 101 115 142 173 230 1 86.5	•	BUFFALD	4	53.9	.010	0	00.	-:	06	95.8	10.2	98	103	60	-	79 2	31 25	5 309	9 336	6 390	.8	1.
1 58°546 97.1 87.8 92.5 9.0 86 100 114 136 156 212	*	CLEVELAND	'n	53,5	.014	-	00.	4	90.2	95.8	10.7	68	101	N.	~	C		5 31	3 341	1 378	1.0	2
1 55.7 .002 0 .00 100.2 90.6 95.4 9.6 95 110 124 152 185 227	*	PITTSBURGH	-	56.5	•		.46	97.1	87.8	92.5	0.6	98	100	4	_	58 21	12 24	8 31	4 35(382	8	1.
	*	PITTSBURGH	-	55.7	.002	0	00.	100.2	9006	95.4	9.6	95	110	124 1	-	10		15 31	3 33	6 361	1.0	2

TABLE 6 - MOTOR GASOLINE SURVEY, SUMMER 1970
ANALYSES OF LOW-LEAD CONTENT GASOLINE -- CONTINUED

LOSS		1.1
S M	oreo o ero eee∪	٠.
HG)	WW44 W WW4 WW44 W W W W W W W W W W W W	427
00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		391
¥ 0	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	359
40	00000 0 0000 0000 00000 1 1 1 1 1 0 1 1 0 1 0 0 0 1 1 1 1	272
TION VAPO	0000 0 000 0000 0000 0000 0000 0000 0000	219
-196	1114	168
DISTIL PERCENT 20 30		142
10 F		116
EMPERATURE, F PERC BP 5 10 20	111011111111111111111111111111111111111	102
TENP 18P		87
RVP, ASTM D323	0000 0 0000 0 000 	9.5
X I	\$0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	69.7
T T T T T T T T T T T T T T T T T T T) er
CCTANE NUMBER ES. MOT. R+ STM ASTM ==	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	500
RESP ASTM D908	00000000000000000000000000000000000000	93.9
LEAD, ASTM D526 G/GAL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
GUM, ASTM D381	~1111010111011×1×1	0
SULF, ASIM D1266	0.00.00 0.003 0.001 0.004 0.007 0.007	.026
	40 4 6 4 4 60 00 00 00 00 00 00 00 00 00 00 00 00	8 8 3
SAMPLES D287	 	· un
N A N		
	LITTLE RUCK LITTLE RUCK NEW URLEANS NEW URLEANS NEW URLEANS SHREVEPORT SHREVEPORT AGKSON MINNEAPOLIS-ST. PAUL MUSTON BAKRSFIELD BAKRSFIELD SAN FRANCISCO LOS ANGELES LOS ANGELES	
CITY	LITTLE RUCK LITTLE RUCK NEW URLEANS NEW URLEANS NEW URLEANS NEW URLEANS SHREVEPORT SHREVEPORT SHREVEPORT MINNEAPOLIS-ST. MINNE	LES
	LITTLE RUCK NEW ORLEANS NEW ORLEANS NEW ORLEANS NEW ORLEANS SHREVEPORT SHREVEPORT ANNINGAPOLIS MINNEAPOLIS MINNEAP	ANGELES
	LITTLE NEW DRL NEW DRL NEW DRL NEW DRL SHREVEPP NOWNEW DRL NOWNEW DRL NOWNEW DRL NOWNEW DRL NOWNEW DRL NOWNEW DRL NOWNEW DRR NOWNEW	LOS
101		
DISTRICT	000000000000000000000000000000000000000	. =

TABLE 7. - Cumulative percents of samples of all grades by research octane numbers by districts, motor-gasoline survey, summer 1970

								Distric	ti									Cumular
mber	-	1 2 3 4		4	ın	•	7	10	٥	10	11	12	13	14	15	16	17	sambles
900					,					**		1	1.9	2.7			1.7	~
91									.7	1.7		80	7.3	6.1		1.3	6.9	0.
200	7.	2.	1.7	1.1		4	•	8. 	28.1	29.6	39.5	2.0	25.6	33.2		6.3	10.9	44
4 5	14.3	17.2	26.5	20.0		11.5	10 10 10 10 10 10	46.0	000	200	51.1	32.5	4 0 0 0 0 0 0 0	40		34.2	37.7	1,60
90	48.6	(F) (F)	6.6	50.0		50.0	49.4	10 10	50.0	51.7	51.1	0.0	51.1	49.8		50.6	50.9	2,55
99	50.7	51.1	0 . U	50.0		200	0 0	51.0	20.0	55.0	54.7	31.0	62.8	58.7		9.00	9.00	2009
000	50.7	53.2	52.4	53.1		100.0	95.7	80 0 80 0	93.2	9 6 6	100.00	94.2	74.9	76.7		900	98.9	3,20
101	99.3	97.2	97.5 98.9	98.9	99.2		100.0	98.1		99.6		99.6	99.9	100.0	99.4	100.0	9.00	5,046

TABLE 8. - Cumulative percents of samples of all grades by motor octane numbers by districts, motor-gasoline survey, summer 1970

Motor								Distr	ţ									Cumulative
	1 2 3 4	2	e	4	in	0	~	•	0	01	=	12	13	14	15	16	=	samples
																9.		
									2.1				1.9	1.8		2.5		58
		.2							4.1	7.1	6.		7.1	0.6	1.9	3.2		121
	1.4	2.3	1.0	6.	2.4	4	1.3	2.5	40.4	20.8	10.3		25.7	28.3	1.9	9.5		667
	20.0	17.3	16.6	13.0	22.8	16.8	12.6	20.6	49.3	43.8	26.7	5.8	45.7	41.3	17.3	38.6		1,328
	45.0	45.3	42.0	42.6	42.3	42.5	38.1	43.2	50.0	50.4	48.0	29.6	48.8	49.8	48.1	48.7		2,286
	49.3	50.9	49.3	49.8	51.2	49.6	49.8	50.4	51.4	51,3	52.0	45.3	52.0	50.2	50.0	50.0		2,569
	50.7	51.6	51,3	50.9	51.6	50.0	50.6	51.8	52.7	51.7	52.0	51.9	56.7	57.4	50.6	50.0		2,668
	51.4	52.9	52.6	52.3	52.0	50.4	50.6	52.6	52.7	52.1	52.0	51.9	61.1	68.6	51.3	51.3		2,757
	57.9	62.2	56.9	56.3	55.7	54.0	53.2	57.4	58.9	56.7	57.1	56.4	68.9	77.1	72.4	79.1	77.1	3,142
	85.0	7.06	81.2	74.2	76.8	67.3	76.6	73.8	85.6	7.97	72.6	70.4	78.2	84.8	99.4	98.1		4,109
	99.3	99.5	6.96	95.6	96.3	0.96	96.1	95.5	93.8	96.3	87.5	93.4	90.3	92.4	99.4	99.4		4,848
	100.0	100.0	100.0	98.0	100.0	100.0	100.0	100.0	9.96	90.66	95.1	100.0	95.2	99.1	99.4	99.4		5,031
				90.6					99.3	100.0	99.1		98.7	9.66	100.0	100.0		5,085
				100.0					100.0		100.0		6.66	9.66				5,099
													100.0	90.66				5,100
														100.0				5.101

State	Location	Samples	State		Location	Sample:
District 1 (Northeast)			District 11 (So	uth Plains)		
Maine	Portland	18	Kansas		Coffeyville	6
Massachusetts	Boston area 2 locations	122 140			McPherson Wichita	10 62
District 2 (Mid-Atlantic Coast)			Missou Oklah		Springfield Bartlesville	30 6
	Hartford	()			Oklahoma City	74
Connecticut Maryland	Baltimore	61 85	Texas		Tulsa Dallas-Fort Worth	78 63
New Jersey and New York New York	New York City area Albany	176 23			8 locations	329
Pennsylvania	Harrisburg	19	District 12 (So	uthern Texas)		
Pennsylvania and New Jersey Virginia	Philadelphia area Richmond	156 91	Texas		Corpus Christi	51
	7 locations	तार			Houston San Antonio	147 45
District 3 (Southeast)					3 locations	243
Alabama	Birmingham Mobile	58 30	District 13 (So	uth Mountain States)		
Florida	Jacksonville	25	Arizon	a	Phoenix	75
	Miami area Tampa	123 2	Califo	rnia	Tucson Bakersfield	14 76
Georgia North Carolina	Atlanta	123 71	Colora		Denver	103
North Carolina	Charlotte Wilmington	20	Nevad	a	Las Vegas Reno	24 24
South Carolina Tennessee	Charleston Chattanooga	4 30	New A	Mexico	Albuquerque Amarillo	90 81
1411167266	10 locations	486	Texus		El Paso	74
District 4 (Appalachian)					Lubbock Midland	23 55
			Utah		Salt Lake City	50
New Yark Ohio	Buffalo Cincinnati	94 81			12 locations	689
	Cleveland	99	District 14 (No	orth Mountain States)		
	Columbus Toledo	15 52	Idaho		Boise	28
Pennsylvania	Northwest Pennsylvania	16	Monta	na	Billings	60
West Virginia	Pittsburgh Charleston	65 24	Washir	ngton	Great Falls Spokane	6 91
	8 locations	446	Wyomi	ng	Casper 5 locations	38 223
District 5 (Michigan)			District 15 (Pa	cific Northwest)		
Michigan	Central Michigan	52			B. d. I	
	Northern Peninsula 3 Tocations	165 29 246	Orego Washir		Portland Seattle 2 Tocations	57 99 156
St. 1 . / /st . / 1912 . 1 . 1	3 locations	240	D: . * . 1/ /h/	4 - 6 1% 13	2 locarions	130
District 6 (North Illinois)	ent 4	114		orthern California)		1.00
Illinois and Indiana	Chicago area Davenpart	114 42	Califo	rnia	San Francisco Bay ar 1 location	rea 158 158
Wisconsin	Madison	14 56	D::-+ 17 /C-	uthern California and Haw	!!\	
	Milwaukee 4 locations	226				
District 7 (Central Mississippi)			Califor Hawaii		Los Angeles area Honolulu	154 21
Indiana	Evansville	36			2 locations	175
Kentucky	Indianapolis Louisville	67 57		Total	86 locations	5, 104
Missouri and Illinois	St. Louis area 4 locations	71 231				
District 8 (Lower Mississippi)	4 locations	20.	District	Locations	Samples	Percent
			1 2	2 7	140 611	2.7 12.0
Arkansas Louisiana	Little Rock Baton Rouge	77 24	3	10	486	9.5
Louisiana	Lake Charles	2	4 5	8 3	446 246	8.7 4.8
	New Orleans Shreveport	59 47	6	4	226	4.4
Mississippi	Jackson	77	7 8	4 7	231 359	4.5 7.0
Tennessee	Memphis 7 locations	73 359	9	3	146	2.9
			10 11	5 8	240 329	4.7 6.5
District 9 (North Plains)			12	3 12	243 689	4.8 13.5
Minnesota	Minneapolis-St. Paul	84 44	13 14	5	223	4.4
North Dakota	Fargo Williston	18	15 16	2 1	156 158	3.1
	3 locations	T46	17	_2	175	3.4
District 10 (Central Plains)			Total	86	5, 104	100.0
lowa	Des Moines	60	Total	86	5, 104	100.0
	Des Moines Phillipsburg Kansas City area	60 10 96	Total	86	5, 104	100.0
fowa Kansas	Phillipsburg	10	Total	86	5, 104	100.0





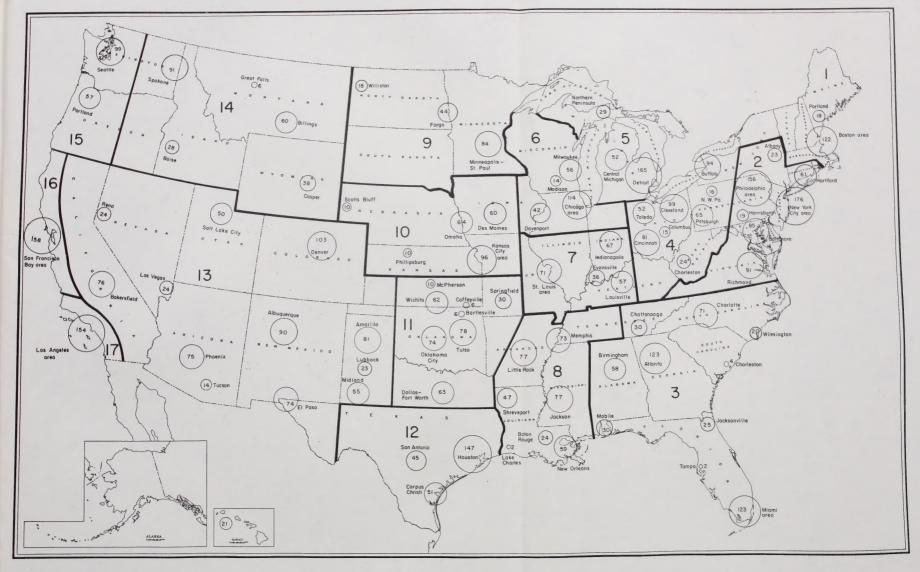


FIGURE 5.- Map Showing Locations and Numbers of Samples for the National Motor Gasoline Survey, Summer 1970



